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**An investigation into the effect of corporate
governance on audit quality in developing markets:
Evidence from Jordan**

Salem Nahar Alhababsah

Thesis submitted to the University of Durham in fulfilment of the Degree of Doctor of
Philosophy

July 2016

ABSTRACT

The objective of this study is to provide comprehensive and up-to-date evidence of current corporate governance practices, and their impact on audit quality, in the developing economies (the case of Jordan). Given the importance of audit quality in increasing investors' confidence and developing financial markets; the study has a motivation to examine the role played by boards of directors, audit committees and different ownership types in the Jordanian market in ensuring high audit quality. Mixed and inconsistent inferences from previous literature regarding the role played by corporate governance across the world provide a motivation to ask whether it is reasonable to expect to find a relationship between corporate governance mechanisms (e.g. boards of directors and audit committees) and audit quality in one of the developing countries where the legal liability and investors' protection are weak and where overall regulations are still underdeveloped.

The study employs two different methodologies to obtain deep insight into the matter under investigation. By using 690 firm-year observations of public non-financial firms for the period 2009 to 2014, and by employing different statistical estimation methods; the first part of the study highlights the importance of boards of directors' independence, audit committees' independence and financial experience, family ownership, financial institution ownership, government ownership and foreign ownership in ensuring high audit quality. However, the results show that gender diversity and board size have a negative correlation with audit quality.

The questionnaire survey provides a clearer understanding of the impact of boards of directors, audit committees and different ownership identities on audit quality from perceptual viewpoints. This is by taking into consideration the perceptions of the important players in corporate governance who are members of boards, members of audit committees and external auditors. Analysing the views of the respondents supports the hypotheses and reveals that boards of directors' attributes, audit committees' attributes, and different ownership identities do, to a large extent, play a role in promoting audit quality. Furthermore, the respondents suggested some improvements/changes to the existing governance code, which could be a valuable input for any future governance reform.

The overall result offers useful feedback for the regulatory bodies to consider the current corporate governance practices, and to benefit other interested parties in gaining a better understanding of the role played by corporate governance mechanisms in audit quality. This feedback can also apply to other developing

markets in countries that share similar economic, political, social and cultural environment to those in Jordan.

DECLARATION

I hereby declare that the content of this thesis, has not been previously submitted for a degree in this or any other university.

Salem Alhababsah

ACKNOWLEDGMENTS

IN THE NAME OF GOD, THE MERCIFUL, THE COMPASSIONATE

All Praise be to GOD, the Lord of the worlds, prayers and peace be upon Mohammed His servant and Messenger, All praise be to You, we have no knowledge except what You taught us.

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STATEMENT OF COPYRIGHT

The copyright of this thesis rests with the author. No quotation from it should be published without the author's prior written consent and information derived from it should be acknowledged.

DEDICATION

This effort is dedicated to the memory of my father. Also, it is dedicated to my mother, my wife, my little one, my father and mother in law, and to all other family members who are impatiently waiting for me to gain my PhD.

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List of abbreviations

JCGC	Jordan Corporate Governance Code (2008)
JSC	Jordan Securities Commission
JACPA	Jordan Association of Certified Public Accountant
B_IND	Proportion of independent members to total members
RD	Role duality when the chairman holds the CEO position at the same time
B_MEET	Frequency of board meetings during a year
ASE	Amman Stock Exchange
SDC	Securities Depository Centre
IAS	International Accounting Standards
IFRS	International Financial Reporting Standards
B_SIZE	Number of board's members per year
GEND	Proportion of female members to total members
AC_IND	Proportion of independent members to total members
AC_EXP	Proportion of members who have financial expertise to total members.
AC_MEET	Frequency of audit committee meetings during a year
AC_SIZE	Number of audit committee's members
FAMILY_OWN	Family ownership
INST_FIN	Financial institutions
INST_NON FIN	Non-financial institutions
FOR_ARB	Foreign Arab owners
FOR_NONARB	Foreign non-Arab owners
GOV_OWN	Government ownership
ROA	Return on asset

CHAPTER ONE: INTRODUCTION

1.1. Study overview

Since some researchers named the 19th century as an entrepreneur century because of the establishment of modern corporations, and the 20th century was named as a management century as it witnessed an evolution of managerial theories, the 21st century will be the century of governance (Tricker, 2012). Although the ‘corporate governance’ term was rarely used before the 1980s, during the last few decades it has become one of the most central issues addressed by researchers, economists, legislators and economic entities whatever their sizes, or their business nature. Corporate governance gained more attention as a protection against corporate fraud, especially in the aftermath of economic crashes and fiscal crises experienced by many countries of East-Asia, Latin America, Russia and the UK in the 90s. The importance of corporate governance was reinforced by yet another international financial crisis and scandals at the onset of the current millennium, particularly in the US.

As a consequence of the financial crisis and the corporate scandals, and also because of the substantial effect of corporate governance on corporate success and on overall economic health; a number of dramatic regulatory changes have been formed and implemented around the world aiming to improve corporate governance and safeguard the interests of all related parties in the economic entities. These changes are epitomised in the Cadbury Report (1992) in the UK, which was the first published code of corporate governance; the King Report (1994) in South Africa; the Dey Report (1994) in Canada; the Bosch Report (1995) in Australia; the Vienot Report (1995) in France, and the Sarbanes-Oxley Act (2002) in the US.

The Jordanian economy has been directly affected by the conflict in the Middle East through the last century and it arrived at a critical point during the Gulf War II in 1991. As a consequence of this war, Jordan suffered from the cost of receiving more than 800,000 Iraqi refugees and, at the same time, all external aid from the Gulf and Western countries was cut off for political reasons. To mitigate these economic obstacles, the Jordanian government launched an economic reform process at the beginning of the 1990s. Most importantly, Jordan launched its privatisation programme which started in 1996 aiming at enhancing the efficiency and productivity of the targeted enterprises, creating a suitable investment environment to attract external investment, and strengthening the economy and the financial market by this long-term investment.

As a part of its efforts for the privatisation process to succeed, to improve governance and the disclosure systems, and to increase confidence in the overall economy and financial environment in order to attract more investment, the Jordanian government enacted important regulations relevant to the for business and financial environments. These regulations were the Companies Act (1997), the Temporary Securities Act (1997), and the Securities Act (2002). In addition, the Jordanian Securities Commission (JSC) enacted the Jordanian Code for Corporate Governance (JCGC thereafter) in 2008 for shareholding companies listed at the Amman Stock Exchange (ASE). The policy makers emphasised corporate transparency, good governance, and high-quality financial statements to maintain the market's reputation and to motivate investment in the capital market, as well as to work as a shield against corporate fraud. Also, foreign investment is common in the Jordanian market, so retaining current foreign investors and attracting further investors are of great interest to regulatory bodies in Jordan.

The corporate governance regulation in Jordan put many responsibilities on the shoulders of boards of directors and audit committees as essential corporate governance mechanisms; ensuring audit quality being one of those responsibilities. The roles of these two governance pillars are highlighted as a central part of the Corporate Governance Code (2008) as monitoring mechanisms to ensure high audit quality which helps in protecting shareholders' interests as well as developing the financial market. Moreover, as they provide a fair assurance about firms' financial positions, the external auditors are considered to be an essential component in the corporate governance mosaic and they play an important role in mitigating agency conflict (Watts and Zimmerman, 1983; Cohen *et al.*, 2002; Piot, 2001).

Given this, the study aims to examine whether these corporate governance mechanisms fill the anticipated/expected role in being able to ensure high audit quality. Mixed and inconsistent outcomes from previous literature, regarding the role played by corporate governance across the world, provides a motive to ask whether it is reasonable to expect to find a relationship between the most important corporate governance mechanisms (boards of directors and audit committees) and audit quality in one of the developing countries where the legal liability and investors' protection are weak and where overall regulations are still underdeveloped.

In addition, given that legal protection for shareholders is relatively poor in developing countries, the concentration of ownership is dominant as an effective internal corporate governance mechanism in order to protect investors' interests (Shleifer and Vishny, 1997). The study, therefore, has a motive to examine whether the different types of controlling shareholders, who are common in Jordanian market, have a positive effect on audit quality.

The study employed two different methodologies to obtain a deep insight into the matter under investigation and to broaden the generalisability of the results. The study employs a secondary data-based method in the first part. In the second part of the research primary data, obtained through a questionnaire survey, has been used in order to enrich data quality and attempt to fill a gap in the literature.

The secondary data-based approach enables researchers to use real-world data and to examine a large sample size. In this part, the study examined the quantifiable boards of directors' and audit committees' characteristics that are accessible through the published annual reports, which are: board independence, role duality, board size, frequency of board meetings, gender diversity on the board, audit committee independence, audit committee financial expertise, audit committee size and frequency of audit committee meetings. Furthermore, this part empirically examines whether audit quality is affected by the different ownership identities that are common in the Jordanian market. To be more explicit there are family owners, non-financial institutions, financial institutions, government and foreign owners.

The dataset for this part is observations for different entities over more than one year (six years from 2009 to 2014). Given this, the panel data analysis is used as the most appropriate method. The panel data approach has a number of favourable characteristics. For instance, using panel data analysis plays an important role in avoiding the omitted variables problem, i.e. controlling variables which are not observed across entities or variables that may change over time helps in controlling the endogeneity problem, improves the efficiency of econometrics estimates, and it can deal with different types of variables like variables which change between individuals but are the same over time, such as gender or the industry code; variables that change over time but are the same for all individuals in a given time period,

such as the inflation rate or the unemployment rate; variables that change between individuals as well as over time, such as audit fees, the frequency of audit committee meetings or firms' profitability.

Different estimation methods have been employed, which are appropriate when a dataset is characterised as panel data, e.g. the fixed effects model (that tests the relationship between explanatory and outcome variables within an entity), and the random effects model (which assumes that the difference between groups is random and uncorrelated with the predictor or explanatory variables). In addition, the robust standard error is a common model in the absence of homoscedasticity.

Audit fees levels are used in the secondary data model as an appropriate proxy to capture audit quality. Previous literature and contextual factors support this proxy as the most appropriate one for the Jordanian context. In addition, views of the respondents rated audit fees as a superior proxy for audit quality within the Jordanian environment.

The second part of the study attempts to provide a clearer understanding of the impact of boards of directors, audit committees and different ownership identities on audit quality, based on individuals' perceptions. Those individuals are the important players in corporate governance, such as members of boards, members of audit committees and external auditors. The way that these groups think can assess the impact of the Jordanian governance code recommendations and may provide useful feedback for the regulatory bodies in particular to consider the current corporate governance practices.

The motivation for employing a questionnaire survey model in this study is its ability to obtain unique information from external auditors, members of boards of directors and audit

committee members about the issue under investigation from perceptual viewpoints. In more detail, this model aims to achieve three main objectives. First, identify opinions of the respondents regarding the role of these corporate governance mechanisms in ensuring high audit quality (going beyond the available data in annual reports). This, in turn, supports inferences of the regression model (in the first part of this study) and further offers detailed and deep insights into the perceived corporate governance quality in Jordan and its impact on external audit quality. A robust understanding of this connection is difficult to obtain using secondary data method alone. This will contribute to a better understanding of directors' and audit committees' oversight by evaluating their perceptions of their assigned oversight responsibilities.

Second, examine whether the importance of these governance mechanisms varies across different groups. Interesting comparisons between these groups would highlight any gap in their viewpoints. For instance, a certain group may place more weight on particular mechanisms in comparison to other groups, which in turn informs the debate on the effectiveness of the extant corporate governance mechanisms and encourages further debate on where the balance of power/responsibility for corporate governance should lie.

Third, given that Jordanian regulation, mainly the corporate governance code, is still in its infancy, and given that these targeted respondents have a consultative role in the formation of relevant regulations; the study seeks the views of these relevant respondents regarding possible improvements or changes to the current code, i.e. board of directors and audit committee-related suggestions that they feel are important in promoting audit quality, apart from what is already recommended in the current governance code (given that the regulated board and audit committee characteristics might provide an incomplete picture of directors'

and audit committees' effectiveness). The provided suggestions in turn could be a valuable input for any future governance reform.

A combination of these different methodologies is recommended as a good methodology choice (Rudestam and Newton, (2007). Because each single methodology has its limitations, the secondary data approach suffers from the risk of omitted variables, and it is also difficult to find strong and reliable proxy variables (Beattie *et al.*, 2012), which in turn fails to provide a deep insight into the phenomenon under study. In addition, in a survey-based approach the sample size is relatively small, and this may decrease the scope of the findings' generalisability. Moreover, using different data collection methods within a piece of research ensures the accuracy of data interpretation; thereby enabling researchers to obtain a comprehensive overview of a particular issue, to interpret the research findings, to overcome the potential bias of a single method approach (Hussey and Hussey, 1997) and leads to greater validity and reliability.

1.2. Study motivation and research questions

Although there is plenty of research on corporate governance in countries within the Anglo-American, and Continental European; countries in the Middle East and North Africa region (MENA thereafter) get minimal attention, and the corporate governance research in this region is still underdeveloped. In their survey of the corporate governance practices in the MENA region, Piesse *et al.*, (2012) concluded that corporate governance research in this environment is recommended and it will provide a valuable contribution to the literature.

The majority of the corporate governance literature is conducted in the United States and the United Kingdom. Studies from these contexts (Carcello et al., 2002 and Zaman et al., 2011) leave uncertainties regarding the direction and magnitude of the empirical relationship in a developing market like Jordan. These uncertainties came from the difference in the institutional characteristics of Jordan in comparison to these developed markets; such as the relatively less restrictive auditor's liability, lower disclosure requirements, lower public enforcement, and other institutional differences.

Furthermore, MENA countries share a common culture, religion, language, tribal and family tradition and, to a large extent, colonial effect (Ali, 1990). In this environment, the financial markets are still underdeveloped, and the legal systems largely follow the civil-law tradition which is characterised by weak legal protection compared with the common-law (Omran, 2008). However, important changes have happened across the MENA region in recent years, as the regulatory bodies enacted new or adjusted existing corporate governance regulations, and many firms started to introduce improvements in corporate governance to keep abreast of international markets (International Finance Corporation, 2008). Given this, the context that has been considered in this study is institutionally different from the Western context, and at the same time the results from the Jordanian environment can be generalized to other MENA countries that share the same contextual characteristics.

To the best of my knowledge, in all MENA region countries, especially in Jordan, there is no previous literature examining the effect of internal corporate governance and different ownership identities on audit quality. Therefore, there is a strong incentive to study this matter in a virgin environment where the corporate governance research, in general, is underdeveloped. Additionally, an analysis of this issue from the developing countries allows

to explore the relationship between board and audit committee effectiveness and the quality of external audit in the absence of strong directors' legal liability, given the context of relatively weak investor protection. In such context, the audit quality becomes imperative to enable the investors to accurately evaluate and monitor their investment, and to ensure that their interests are sufficiently protected.

Jordan, since the 1990s, has successfully walked down the path towards a market economy. In particular, after launching the privatisation programme, the government has had a continuing interest in promoting effective corporate governance practices to regain investor confidence in the capital market, create a suitable investment environment to attract (and retain) external and local investors, and ultimately to strengthen the economy and financial market by long-term investment. Therefore, credible external auditing becomes essential to boost the investors' confidence in the financial reporting. A lack of this confidence in firms' financial systems and in the reported earnings can adversely affect the financial market; given that investors are the main capital providers who support the economic system.

In this vein, Jordan has introduced a number of regulations aimed at improving corporate governance in order to enhance investors' confidence, and ultimately to develop the financial market. The Jordanian Corporate Governance Code (2008) is one of the most important regulations enacted in recent years. The recommendations of this code emphasise and enhance the role of boards of directors, audit committees and external auditors as key practitioners in the audit process. Moreover, the litigation context in Jordan is weak compared to developed contexts; and this decreases auditor' incentives to perform high audit quality (Francis, 2006; DeFond and Zhang, 2014). This, in turn, increases the importance of

effective boards of directors and audit committees to ensure that the auditors are delivering high audit quality.

Consequently, given the above discussion, and given that the Jordan Securities Commission (JSC) spent much effort in the last years attempting to improve role of boards of directors and audit committees to ensure that investors obtain relevant and reliable information; this creates a motivation to examine the role of these corporate governance mechanisms in ensuring high audit quality in Jordan, and draw the first research question:

RQ1: Do boards of directors and audit committees, as corporate governance mechanisms, have a significant impact on audit quality in a developing market like Jordan?

In addition, ownership structure is considered as an important governance mechanism, especially in the absence of a strong legal environment. In Jordan, as many developing economies, the legal system does not offer sufficient protection for investors, which therefore makes controlling shareholders commonplace in the market.

The different types of controlling shareholders have different investment policies and motivations, which consequently affect how they exercise their control rights over the investee firms. Thus, the ownership in Jordan is typically concentrated in hands of different identities, particularly family ownership and institutional ownership and non-financial institutions). Foreign ownership is common, and the government still owns a block of shares in a number of firms even after the privatisation process.

Therefore, given the importance of audit quality in increasing investors' confidence and in developing the financial market; an interesting question is whether the various ownership identities in Jordan have an impact on audit quality, so the second research question is:

RQ2: Is the level of audit quality in Jordan related to the prevalent different ownership identities?

These two empirical questions are examined based on the secondary data in the first instance. However, the views of the important players in the corporate governance system about role of these mechanisms, which are important, are still missing, i.e. how the main practitioners in the governance system view/perceive the corporate governance mechanisms and how these mechanisms affect audit quality is not well investigated.

Consequently, the second model (questionnaire survey) of the thesis tackles these two questions from perceptual viewpoints of members of directors (who are not members in audit committees), audit committees members and external auditors. This, therefore, provides a clearer understanding of how these respondents perceive the impact of the role of these corporate governance mechanisms on audit quality. The way different groups think about role of these mechanisms may provide useful feedback for the regulatory bodies in particular to consider the current corporate governance practises.

These three groups are important in the corporate governance system. Boards of directors and audit committees are considered to be a cornerstone in corporate governance (Cohen *et al.*, 2008; Cadbury, 1992). The roles of these two governance pillars are highlighted by Jordanian regulation and in particular, they are a central part of the Corporate Governance Code (2008) as monitoring mechanisms to ensure high audit quality which helps in protecting shareholders'

interests. The boards of directors are responsible for the integrity of overall financial reporting systems, and in particular they are responsible for presenting reliable financial statements. The audit committee is the main board sub-committee which has particular oversight responsibility in relation to the financial statements. It is responsible for ensuring auditor independence and reviewing internal control system, discussing matters related to the nomination of the auditor to ensure that he meets the requirements, engaging in the process of appointment of the external auditors, assessing the external auditor's plan of work, reviewing financial reports and discussing matters related to the audit.

Moreover, as they provide a fair assurance about firms' financial positions, the external auditors are considered to be an essential component in the corporate governance mosaic and they play an important role in mitigating agency conflict (Watts and Zimmerman, 1983; Cohen et al., 2002; Piot, 2001). The external auditors have to form and express their opinion on the fairness of firms' financial statements, i.e. they have to produce credible audit quality. Given the potential interaction between external auditors and firms' directors and audit committees, as stated in the Jordanian governance code, the views of the external auditors are important regarding the matter under investigation.

Furthermore, as differences between the groups' perceptions may arise in the questionnaire survey model, the comparisons between these groups would highlight any gap in their viewpoints. For instance, a certain group may place more weight particular characteristics in comparison to other groups. This, in turn, inform the debate on the effectiveness of the current corporate governance mechanisms and encourage further debate on this matter.

Considering the potentially different opinions of the various involved groups also may have implications for the regulatory bodies. This may give them guidance to balance those

opinions against one another and provide a framework and practical guidance on how corporate governance mechanisms affect audit quality. For instance, the Amman Stock Exchange (ASE), the Jordanian Securities Commission (JSA), and the Jordanian Association of Public Accountants (JACPA) take a proactive role in the training of directors, audit committee members and auditors in order to increase awareness of their duties and better enable them to discharge their fiduciary and oversight role.

In addition, while meeting regulation requirements is important, it is not sufficient to ensure effectiveness (Martinov-Bennie, 2007; Contessotto and Moroney, 2013). A number of empirical studies identified numerous indicators of boards of directors' and audit committees' effectiveness not captured in regulation (Gendron and Bedard, 2006; Turley and Zaman, 2007; Cohen *et al.*, 2013). Given this evidence, and given that Jordanian regulation, mainly the corporate governance code, is in its infancy and still evolving, and given that these targeted respondents have a consultative role in the formation of relevant regulations; this motivates the study to look beyond the current governance recommendations to gain a complete understanding of the characteristics that determine boards of directors' and audit committees' effectiveness¹. This is by asking these relevant respondents regarding possible improvements or changes to the current code, i.e. board of directors and audit committee-related suggestions that they feel are important in promoting audit quality, apart from what is already recommended in the current governance code. The provided suggestions, in turn, could be a valuable input for any future governance reform. So, the third research question will be:

RQ3: What changes to the extant governance regulatory framework do respondents believe would most improve audit quality?

¹ Based on the result of their survey study, Contessotto and Moroney (2013) pointed out that adoption of regulated best practice does not necessarily ensure audit committee effectiveness; so it is important to look beyond the regulated requirements.

By answering these research questions - using primary data through a questionnaire survey alongside the secondary data model - the study (a) builds on strong ground to generalise the findings as the scope will be broader (b) furnishes further insights into comprehending the role of the board of directors and audit committee as well as different ownership identities in promoting high quality auditing; (c) may benefit policy makers in improving/developing appropriate governance practises in such emerging economy; and (d) makes a valuable contribution to the literature and empirically informs the debate about the effectiveness of boards of directors and audit committees in developing markets, as well as the role of different ownership types in maintaining shareholders' interests e.g. by promoting higher audit quality.

Finally, it is worthwhile to mention here that given the overall purpose of this research is to obtain further insights into comprehending the role of the boards of directors and audit committees, as well as different ownership identities in promoting high audit quality; the questionnaire survey will complement the secondary data approach (first model) by exploring a broad set of attributes/activities of boards of directors and audit committees that are difficult to measure by the published secondary data. The survey approach can, therefore, support and complement the findings derived from the secondary data model (the support role is by re-examining the variables that are included in the secondary data model but by different methodology, and the complement role is by examining other governance attributes that have not been examined in the secondary data model).

1.3. Findings overview

The first part of the study (the secondary data approach) used 690 firm-year observations of public non-financial firms. The Jordanian Code of Corporate Governance was published in 2008 by the Jordan Securities Commission (JSC), and the public shareholding firms were asked to adapt to this code starting from the beginning of 2009. Therefore, the study covers the period from 2009 to 2014 inclusive. The data was manually collected through annual reports. The Jordan Securities Commission's website and firms' websites are mainly used to download the annual reports.

By employing different estimation methods; this part of the study highlights the importance of the boards of directors' independence, audit committees' independence, audit committees' financial experience, family ownership, bank ownership and government ownership, in ensuring high audit quality. These results are consistent with the notion that more independent boards are seeking to maintain shareholder interests as well as to protect their reputation capital and by purchasing differentially higher-quality audits, and this is in line with agency theory propositions.

Although boards of directors in such contexts are still dominated by male members, there are some females on a number of boards across listed companies. The regression result indicates that the existence of females on the boards adversely affects audit quality; likely to be due to more conflict as supported by findings of the second model. Furthermore, the result shows that board size is not an indication of greater board effectiveness; it is arguable that a large board might be related to more communication and decision-making problems, and lead to a negative impact on audit quality by reducing the board's monitoring effectiveness (as highlighted in the questionnaire results).

Audit committees' independence and financial experience also have an essential monitoring role to ensure the quality of financial reporting and serve as important governance attributes. However, the effectiveness of other audit committee characteristics with regards to improving audit quality is insignificant.

It can be noted from the significance level of independence characteristic in the model that the independence of boards of directors and audit committees stands as the most valuable attribute for audit quality. Therefore, the regulatory bodies can recognise the essential role played by independent directors as one of the most important components of the corporate governance system in Jordan. Also, firms' directors can benefit from this result by using it as a parameter to assess how board and audit committee characteristics may affect financial reporting and audit quality.

From the second part of the study, the results of analysing 199 questionnaires reveal that respondents gave high importance to the role played by most boards of directors' characteristics in promoting audit quality. These characteristics are mainly recommended by the Jordan Corporate Governance Code (2008) and are supported by the previous literature, as discussed earlier. Organising a company's financial affairs, setting risk management policies, ensuring that the executive managers have appropriate qualifications and experience, reviewing and evaluating the performance of a company's executive management by the board, in addition to board independence, are the activities/attributes that obtained strong agreement from an overwhelming majority of the respondents as having made a significant contribution to audit quality.

Regarding the perceived roles of audit committee activities in promoting high audit quality, respondents underscored most of these activities. As expected, the audit committees functions,

audit committee composition and audit committee resources have been rated as very important factors in the effectiveness of audit committee oversight, which in turn increases audit quality.

Furthermore, it can be concluded that all ownership types in Jordan play a positive role in increasing audit quality, given the perceptions of audit committee members, other board members, and external auditors. These positive perceptions may have an impact on the behaviour of investors in the financial market. The Kruskal-Wallis test showed no significant differences between the three groups, indicating consistent perceptions regarding this question. The result is consistent with the argument that large capital providers have a significant role in monitoring and controlling managers' decisions due to their ownership volume, and because they are better informed than individual investors.

In conclusion, the findings of the study highlight the significance of the role played by the corporate governance mechanisms (boards of directors, audit committees and the dominant owners in the ownership structure) in ensuring high audit quality. These findings indicate that the governance regulations can contribute positively to audit quality even in developing countries where the weak legal system is weak and cultural environment is different compared to developed countries. This conclusion is consistent with the notion that high quality governance systems are equally, or even more, important in developing countries that are attempting to develop their capital markets and to gain credibility among investors. Hence, the overall findings indicate that the governance mechanisms set by JCGC (2008) to a large extent lead to effective monitoring over auditing (monitoring approach) and the role of these mechanisms not just symbolic i.e. play active rather than passive role, and this is, therefore, consistent with agency theory assumptions.

1.4. Structure of the thesis

This section presents a brief overview of the contents of the thesis. Chapter Two provides an overview to the different economic and regulatory affairs of Jordan, such as general information and the history of Jordan, the history of the economy since independence, regulation development, regulatory bodies, financial market and listing rules, the development and factors affecting the accounting and auditing profession, ownership structures and the corporate governance system. An understanding of the Jordanian environment provides an insight into the research background, motivation, and research questions.

Chapter Three includes discussion of the theoretical framework used in corporate governance literature. There theories are stewardship theory, stakeholders' theory, signalling theory, resource dependence theory, institutional theory, and information acquiring theory. This chapter also shows deeps discussion for agency theory and offers a justification for employing it as a more relevant theory.

Chapter Four provides a discussion of audit quality and a critical literature review in relation to corporate governance practices and audit quality. This chapter contains two sections. The first one related the first empirical model while the second part covers the literature that considers corporate governance from perceptual viewpoints. Section 4.1.2 discusses boards of directors' and audit committees' characteristics. Section 4.1.3 discusses different ownership structures and their correlation with audit quality. Section 2.2.2 presents a summary of the literature about the perceived role of corporate governance mechanisms in

different corporate aspects, and particularly in financial reporting and audit quality. This section 2.2.2 focuses on the perceptions of directors, audit committee members, and external auditors. Hypotheses development for the second model is also presented in this chapter.

Chapter Five contains four main sections. The first and second sections are about research philosophy and paradigms that are adopted in this research (5.1 and 5.2). Section 5.3 discusses the methodology for the first empirical model (secondary data model). This section covers a description of the sample, the sources of data and justification of the time period during which the investigation was carried out, the definitions and measurements of the study variables (hypotheses and control variables), the different estimation methods and model specification. Section 5.4 discusses the research methodology that is employed to address the research questions of the second model (the questionnaire survey). This section contains an introduction in the subsection one; a summary of the research objectives and questions in the subsection two; a discussion of the research tool (questionnaire survey) and how it will be managed in terms of its design, content, piloting and validity assessment in subsections three and four; a presentation of the sample selection and questionnaire distribution procedures in subsection five; a test of the reliability of the questionnaire, which is essential before starting the statistical analysis, in subsection six; and finally a presentation of the section six investigates statistical methods used for the questionnaire analysis in subsection seven.

Chapter Six covers the data analysis of the first empirical model and it contains the following sections. Section 6.1 presents introduction of the chapter. Section 6.2 discusses the descriptive statistics. Section 6.3 is about testing the correlations between the variables. Section 6.4 presents the results of data analysis and the discussion. Section 6.5 presents further analysis of the regression. The final section 6.6 contains the chapter's conclusion.

Chapter Seven presents the analysis and discussion of the perceived roles played by the corporate governance mechanisms, e.g. boards of directors, audit committee activities and ownership structures, on audit quality in the Jordanian market. The chapter is organised as follows: The first section 7.1 is an introduction to the chapter. The second section 7.2 provides a description of the respondents in terms of the demographic information obtained by the questionnaires. Section 7.3 presents the respondents' views about audit quality attributes and potential proxies for audit quality in Jordan. Sections 7.4, 7.5 and 7.6 represent analyses of respondents' views about the roles in audit quality of boards of directors, audit committees, and ownership structures respectively. Section 7.7 covers the suggested improvement made by the respondents. The final section 7.8 contains conclusion of the chapter.

Chapter Eight offers a brief picture of the entire thesis. It presents a study overview including a summary of study motivation and aims. The chapter also shows the main findings, the contribution to knowledge, the implication for policymakers, the limitations and suggested avenues for future research.

CHAPTER TWO: JORDANIAN CONTEXT

2.1. Introduction

This chapter provides An overview of different economic and regulatory affairs of Jordan such as general information and history of Jordan, history of economy since independence, regulation development, regulatory bodies, financial market and listing rules, the development and factors affecting accounting and auditing profession, ownership structure and corporate governance system. An understanding of Jordanian environment provides an insight into the research background, motivation and research questions.

2.2. Jordan Economy: An overview

Jordan is a small and recent state established after the First World War in 1921 and it remained as a British colony until 1946. Jordan has limited natural resources and the economy is not fully independent. Jordan's economic resource heavily depends on foreign aid, overseas remittances, tourism, and export, and these are the main sources of hard currency earnings. Unlike its neighbouring countries, Jordan suffers from lack of oil, gas and coal reserves (Al-Akra et al., 2009).

In addition to the scarcity of local resources, the Jordanian economy was affected to a large extent by the Arab-Israel conflict from independence in 1946 until the date of the Jordan-Israel Peace Treaty in 1994. Jordan's resources were exhausted by many wars against Israel; the 1948 war, the 1967 war and the 1968 war. In the 1948 war, and after establishment of the Israeli state on a large part of the West Bank, a huge number of Palestinians (335,000) were

transferred to Jordan. In 1967, when Israel had occupied the rest of the West Bank, hundreds of thousands more Palestinians fled to Jordan (Al-Akra et al., 2009 and Alshiab, 2003). All these events affected the Jordanian economy and put more pressure on the limited local resources.

During the 1950s and 1960s the Jordanian economy was in its early stage: a small economy, low gross saving, low local revenue and low investment, generally. The total imports were largely higher than exports that led to a deficit in the trade balance that was 37% as a percentage of GDP. Also, foreign aid grew from JD 68 million in 1956 to JD 385 million in 1968 (Alshiab, 2003). However, in this period the GDP increased by 6.9%, real income per capita grew by 4.4% and income from industry and service increased by 14.2% and 9.1% respectively (Mustafa, 1977 cited in Alshiab, 2003). During this period also the government launched many infrastructure and construction projects which positively affected the growth rate (Alshiab, 2003).

In the 1970s, and because of the civil war in Lebanon, many businesses and companies shifted from Lebanon to Jordan. Furthermore, due to the enactment of the Encouragement of Investment Law in 1972 and the liberalisation of foreign investment regulations, a large increase in economic activity was taking place (Al-Akra et al., 2009). Therefore, the movement of companies from Lebanon to Jordan and the economic prosperity during the 1970s increased the financial importance of Jordan and this encouraged the Central Bank of Jordan, with assistance from the World Bank, to establish the first financial market in Jordan: the Amman Financial Market (AFM) in 1976 (Al-Akra et al., 2009 and Alshiab, 2003).

In the beginning of the 1980s, the GNP increased due to the increase of external aid from Arab-oil countries as a result of the increase in oil revenues, as well as increasing the

remittance from Jordanian workers in Gulf countries, which increased from USD 10.2 million in 1972 to USD 565 million in 1985 (Alshiab, 2003).

Moreover, in the 1980s, and especially in the last few years from that decade, the Jordanian economy faced serious problems which largely affected all people's lives. In 1987, and due to the sharp decline in the oil price, the Jordanian economy arrived at the worst level because of the sharp decrease of foreign aid from Gulf countries (rich oil countries) and the decrease of expatriates' remittances — which the Jordanian economy is heavily dependent on — and also, more than 35,000 of those expatriates were returned back to Jordan (Brynen, 1992; Al-Akra *et al.*, 2009).

In 1988, and as a result of the continuation of the bad economic situation, the Jordanian Dinar lost about 45% of its value against the US dollar, the unemployment rate increased to 35%, the inflation rate increased and the population percentage that was under the poverty line rose to 30% (Al-Akra *et al.*, 2009). Also, in 1989 the external debt amount became double the GDP (\$ 8.3 billion) and there was a shrinkage of foreign currency reserves (Brynen, 1992; Ramachandran, 2004).

To overcome the obstacles which faced its economy, the Jordanian government launched an economic reform process with help of the International Monetary Fund (IMF) in 1989. Jordan borrowed \$ 275 million as a Stand-By Agreement (SBA) from the IMF to strengthen foreign currency reserves, control the inflation rate and correct the imbalances in the economy (Brynen, 1992; Alissa, 2009).

In 1990 and 1991, and due to the Jordanian political position, which was supporting the Iraqi regime during the Gulf War, the Jordanian economy suffered again: cutting off external aid from Gulf and Western countries, expulsion of Jordanian workers from Gulf countries,

especially from Kuwait, a decrease in tourism income, in addition to the cost of receiving about 800,000 Iraqi refugees. Therefore, Jordan signed another Stand-By Agreement with the IMF in 1992 to mitigate the effect of these events on its economy (Alissa, 2009).

After that, with the encouragement and assistance of the World Bank and the IMF, Jordan started with many economic and financial reform processes. It introduced the sales tax (value-added tax) in 1994, reduced the maximum custom tariff from 70% to 50% in 1996, trade liberalisation, and most importantly, launched the privatisation process (Al-Akra *et al.*, 2009; Alissa, 2009). The privatisation process in Jordan is one of the most, if not the most, successful privatisation programmes in the Middle East (Ramachandran, 2004). The programme started in 1996, and the main aims are enhancing the efficiency and productivity of the targeted enterprises, creating a suitable investment environment to attract external investment, and strengthening the economy and financial market by this long-term investment (ASE, 2014).

2.3. Financial market regulations

As a part of its efforts to success the privatisation process, to improve governance and the disclosure system, and to increase confidence in the overall economy and financial environment to attract more investment, the Jordanian government enacted the most important regulations for contemporary business and the financial environment, which are: the Companies Act (1997), the Temporary Securities Act (1997), and Securities Act (2002). These laws set the framework for the corporate governance system, improved corporate disclosure, and emphasised the adoption of International Accounting Standards (IAS/IFRS).

2.3.1. Companies Act 1997

The government enacted this law to replace the previous one (Companies Act 1989) to keep pace with its new economic stage and because of the deficiencies of the previous act which was suffering from its limited scope and coverage; in particular it did not contain sufficient disclosure requirements (Omar, 2007).

Subject to the provisions of this law, companies registered under this law should be divided into the following forms: General Partnership, Limited Partnership, Limited Liability Company, Limited Partnership in Shares, Private Shareholding Company, and Public Shareholding Company (Article 6). With respect to the Public Shareholding Companies (PSCs), the act reports in details the PSC establishment procedures, its capital, subscription procedures, annual general assembly meetings (GAMs) process, PSC management, and liquidation procedures. Also, the new act emphasises the requirement to adopt IAS (IFRS) and ISA.

The following are some of the most important of the act's features regarding PSCs:

The members of the board are elected for a period of four years by the shareholders in the GAM (Article 132/A).

- The Board of Directors “shall prepare, within a maximum period of three months from the end of the fiscal year of the company, the annual balance sheet of the company, its profit and loss statement, and cash flows statements accompanied with their clarifications compared with those of the previous fiscal year, all duly certified by the company auditors, to be presented to the annual GAM” (Article 140).

- The PSC Board of Directors “shall prepare a semi-annual report that includes the financial position of the company, the results of its operations, profit and loss account, cash flow list and the clarifications related to the financial statements certified by the company auditors” (Article 142).
- The Board of Directors of the PSCs “shall annually disclose to shareholders (a) all amounts received from the company during the fiscal year by the chairman and each of the members of the Board of Directors, in the form of wages, fees, salaries, bonuses, remuneration and others, (b) any benefits that the chairman and the members of the Board of Directors enjoy such as free accommodation, cars and others, (c) amounts that have been paid to the chairman and members of the Board of Directors during the fiscal year such as travel and transport allowances inside and outside the Kingdom, (d) a detailed account of the donations paid by the company during the fiscal year, and the entities that received the said donations, and (e) a list of the names of the Board of Directors” (Article 143).
- Remuneration of the PSC directors’ members (including the chairman) “shall be determined at a rate of 10% of the net profit which can be distributed as dividends to shareholders, after deducting all taxes and reserves therefrom, provided that the remuneration for each of them do not exceed five thousand Jordanian Dinars annually. Remuneration shall be distributed amongst them in proportion to the number of meetings attended by each of them” (Article 162/A).
- Public listed firms shall prepare its financial statements in accordance with the international accounting and auditing standards.

The Companies Act shows some features relating to the process of board of directors’ selection. Within four months after the end of the financial year, an invitation is sent to each shareholder (at least fourteen days prior to the date set for the meeting) to attend the General

Assembly meeting. This invitation letter is accompanied by the agenda of the meeting and the report of the board of directors, its annual accounts, in addition to the auditors' report (Article 144). Other invitations also sent to the head of the Jordan Securities Commission (JSC) and the Companies' Controller Department (CCD) in order to attend the GAM (usually they send representatives on behalf of them).

Company act mandates board of directors to announce the date set for the meeting of the Company General Assembly Meeting in two local daily newspapers, within two weeks prior the date of the general meeting (Article 145). Also they should announce the verbal invitation once through radio or television within a maximum period of three days prior to the date of meeting (Article 145). Based on this act, the shareholders have the right to give a proxy to another shareholder to attend the meeting on his/her behalf, and the proxy could be in writing, on a special template prepared for this purpose approved by the official companies' controller (Article 179).

2.3.2. Securities Act 1997

The 1997's act was targeted to organise and regulate the Jordanian capital market in line with international standards (Al-Shiab, 2006). Under this act, three controlling and regulating bodies came to the existence. Those new bodies are the Jordan Securities Commission (JSC), the Amman Stock Exchange (ASE), and the Securities Depositary Centre (SDC).

The Jordan Securities Commission (JSC) was established to protect investors, and organising and promoting the capital market to ensure fairness, efficiency and transparency. To achieve these main targets, the JSC has a responsibility to regulate the issuance of securities and monitor the dealing process, to regulate and promote firms for accurate disclosure, and to regulate the licensing and registration of listed firms (Securities Act, article 8. Furthermore,

the JSC regulates and monitors the Amman Stock Exchange and Securities Depository Centre (Securities Act, article 8).

The Amman Stock Exchange (ASE) was established in March 1999 as a non-profit, private institution with an independent administrative and financial position. It replaced the Amman Financial Market (AFM) which was established in 1978. The ASE is authorised to operate as an exchange for the trading of securities. The ASE is committed to the principles of fairness, transparency, efficiency, and liquidity. ASE seeks to offer a strong and reliable environment for its listed securities while protecting the rights of its investors. To provide this transparent and efficient market, the ASE meets the latest international standards and it has implemented internationally recognised instructions regarding market divisions and listing criteria (ASE, 2013).

2.3.3. Securities Act 2002

No material changes were made from the previous act. However, the 2002 Securities Act strengthened the role of the JSC, ASE and SDC and required all listed companies to adopt the IFRS. The 2002 Act also gives more power to the JSC with respect to imposing fines, suspending trading, or delisting companies in case of significant violations (ROSC, 2005).

2.3.4. Listing Securities Directives 2012

The ASE listing directives 2004 is mainly a document listing the requirements of suspending and delisting causes. Under these directives, to list its shares in the market, one year at least should have passed since it obtain permission to work, and the company should provide the ASE with the “company's memorandum of association, articles of association and prospectus, annual report for the last financial year (if any), the interim financial statements reviewed by an independent auditor, which covers the period from the end of the financial year preceding

the date of submission of the listing application till the end of the last quarter preceding the date of the listing application (Article 4). As required by the listing directives” (2012); the company's board of directors should issue a report contain the following (Article 4):

- a. A short profile of the firm's establishment, its major aims and its relationship with other related firms.
- b. A detailed specifications of the securities issued by the firm, and for potential issuance in the future.
- c. The board of directors' assessments supported with figures, of the firm's performance, as well as achieved targets compared with the set plan.
- d. The important incidents the firms faced or affected the firms from the date of its establishment till the date of submission of the listing application.
- e. The future plan of the firm over the next three years.
- f. Names of the persons who hold 5% or more of the firm's shares.

The listing of the company's shares listed on ASE shall be suspended in cases of mergers, reduction of the company's capital, any contingency event that may materially affect the sound dealing and Interruption of the normal activity of the company for a period exceeding three months without reasonable justification. Moreover, the ASE delists/cancels shares of the company when it changes its legal status, when suspension of trading exceeds two years and in cases of liquidation, either obligatory or voluntary.

In addition, based on these listing directives, the listed companies should provide the ASE with annual, semi-annual and quarterly reports reviewed by the external auditor, the agenda and decisions of general assemblies and any other information which may affect the price of the share.

2.3.5. Corporate Governance regulation

The results of the World Bank survey (ROSC, 2005) revealed that the Amman Stock Exchange became one of the largest equity markets in the region, as a percentage of market capitalisation to the GDP, legal investor protection in Jordan has been enhanced, companies become more interested in equity financing than before, and as a result of the enactment of new legislation, the quality of corporate disclosure has significantly improved.

Furthermore, the World Bank in its survey (2005) has reported some aspects of corporate governance in Jordan such as: ownership appears to be less highly concentrated comparing to other emerging countries; average free float (as measured by the ASE) is about 40%; family ownership is typical; foreign ownership which is from Arab as well as non-Arab countries is around the half of the market capitalisation.

In order to develop the capital market and its regulatory framework to attract more investments, the Jordan Securities Commission (JSC) developed the Jordanian Code for Corporate Governance (JCCG) in 2008 for shareholding companies listed at the Amman Stock Exchange (ASE). The code is based on "compliance or explain" approach. All listed public firms in ASE should comply with the code, and in case of non-compliance, they required mentioning the reason for non-compliance in the firm's annual report. This approach is intended to give firms more flexibility in implementing the code recommendations and enough time to adapt to them, in order to enhance awareness and to achieve full compliance gradually (JCCG, 2008).

The Code focuses particularly on the role of boards of directors and audit committees as important mechanisms to monitor firms and ensure high reporting quality. For instance, with regards to board of directors' characteristics, the code recommends board of directors'

members should not be less than three and no more than 13, at least one third of them have to be independent members, the board of directors' chairman should not hold any executive position in the company at the same time, and should run regular meetings, no less than six times per year.

With regards to audit committees' characteristics, the code recommends that the audit committees should be composed of no less than three members of the board of directors, at least two of them should be independent members, and at least one audit committee member should have worked previously in the accounting or finance fields, or that member should have an academic or professional certificate in accounting, finance or related fields. Also, audit committees should run regular audit committee meetings, no less than four times per year.

It is worth to mention that the Jordanian corporate governance framework mirrors the models in developed countries especially the UK and the US, without consideration given to the socio-cultural peculiarities of the Jordanian business environment. For example, the JCGC recommendations regarding board independence, role duality, board size, frequency of meetings are similar to the recommendation of Cadbury Report (1992), the UK combined Code of Corporate Governance (1998), Higgs Report (2003) in the UK, and also quite similar to section 101 of SOX in the USA. Moreover, the JCGC recommendations regarding audit committees' structure are similar to the recommendations of Cadbury Report (1992), the UK combined Code of Corporate Governance (2003), and section 301 of SOX.

In this vein, Arcot *et al.* (2010) stated that the UK corporate governance code based on the “comply or explain” approach, which thereafter, adopted in many countries around the world, and became as a ‘trademark’ for good corporate governance system. Using a corporate

governance code that is introduced in a developed country does not necessarily hamper its effectiveness when applying it in a developing country. For example, Malaysia follows the UK corporate governance code, and the empirical studies revealed that the code recommendations have a positive impact on the effectiveness of the Malaysian financial market and on audit quality (Yatim et al., 2006). Thus, the study focuses on the impact of the Jordanian corporate governance code (2008) on audit quality.

2.4. Sectorial analysis overview

Jordanian economy is overwhelmingly service oriented. Around 67% of the GDP from the service sector, and this sector employs more than 75% of the total workforce. The service sector composed of many sub-sectors which are health service, educational service, tourism, transportation, IT and communication, media, energy and commercial service.

Manufacturing sector accounts for 20% of Jordan's GDP and absorbs around 10% from the workforce. It consists of pharmaceutical and medical industries, chemical industries, paper, printing and packaging, food & beverages, tobacco, mining & extraction industries, engineering & constructions, electrical, leathers & clothing, glass & ceramic industries. The mining is the most important sub-sector- within industrial sector- for Jordanian economy (World Bank, 2012).

The major mining exports of Jordan are potash and phosphates. Jordan is one of the largest raw phosphates and Potash producer in the world. The Potash Inc., phosphates Inc., and cement Inc. are the biggest corporations that represent this sub-sector in Amman Stock Exchange, and their market capitalization in 2014 are \$ 5 billion (19% as a percentage of the whole market), \$ 1.3 billion (5% of the whole market), and \$ 80 million respectively (Department of Statistics publications & ASE annual report 2015).

Although Jordanian banking system is one of the smallest in the Middle East, it is more developed system with total assets of JD 29.6 billion (US\$41.4 billion) as of 2014. The system is composed of 23 banks, including three Islamic banks and eight foreign bank branches (Department of Statistics publications 2014, World Bank 2012, and JIB, 2014). Arab Bank is the largest Jordanian bank, it dominates the banking system, accounting for more than half of the total banking assets and its trade value was more than \$ 280 million and its market capitalization was 5.85 billion in 2014 (21.8% of total market capitalization). The largest five banks are the Arab Bank, Housing Bank, Jordan Islamic Bank, Bank of Jordan and Ahli Bank. Those five banks together control more than two-thirds of the total assets and three-quarters of total deposits (Department of Statistics publications 2014, World Bank 2012, and JIB, 2014).

The agricultural sector in Jordan is very limited and this due to scarcity in water resources and swathes which is valid for agriculture is small (about 11% from total land) (World Bank, 2012).

The following tables give information about importance of large ten companies from different aspects (source: ASE annual report 2014):

Top Ten Companies by Market Capitalization

Name of the company	Market Capitalization (USD million)	As a percentage of the whole market
ARAB BANK	5867	21.8
THE ARAB POTASH	5105	19.1
THE HOUSING BANK	2822	10.5
JORDAN TELECOM	1934	7.2
JORDAN PHOSPHATE MINES	1337	5
JORDAN KUWAIT BANK	506	1.9
BANK OF JORDAN	445	1.6
CAIRO AMMAN BANK	387	1.4
JORDAN ISLAMIC BANK	385	1.4
JORDAN ELECTRIC POWER	364	1.4
TOTAL	19198	71.2

Top Ten Companies by Value Traded in 2014

Company's Name	Value Traded (Million USD)	% to Total Value
ARAB BANK	281	7
MIDDLE EAST COMPLEX FOR ENG., ELECTRONICS AND HEAVY INDUSTRIES	277	6.9
AL-TAJAMOUAT FOR CATERING AND HOUSING	214	5.4
UNION LAND DEVELOPMENT CORPORATION	152	3.8
BANK AL-ETIHAD	144	3.6
JORDAN PHOSPHATE MINES	140	3.5
SPECIALIZED INVESTMENT COMPOUNDS	127	3.2
JORDAN PETROLEUM REFINERY	122	3.1
THE ROYAL JORDANIAN AIRLINES	121	3.1
UNION INVESTMENT CORPORATION	112	2.8

Top Ten Companies by Shares Traded in 2014

Company's Name	Shares Traded (Million Share)	% to Total Share
MIDDLE EAST COMPLEX FOR ENG., ELECTRONICS AND HEAVY IND	570	14
UNITED ARAB INVESTORS	237	5.8
TAAMEER JORDAN HOLDINGS	202	5
AL-TAJAMOUAT FOR CATERING AND HOUSING	195	4.8
ARAB REAL ESTATE DEVELOPMENT	188	4.6
FIRST JORDAN INVESTMENT COMPANY	156	3.8
SOUTH ELECTRONICS	143	3.5
DARKOM INVESTMENT	116	2.9
MODEL RESTAURANTS COMPANY	107	2.6
SPECIALIZED INVESTMENT COMPOUNDS	104	2.6

2.5. Ownership structure

In Jordan as in other emerging economies, the legal system does not offer sufficient protection for investors, which therefore makes ownership concentration typical of most listed firms. The results of the World Bank survey (ROSC, 2005) revealed that ownership in Jordan appears to be less highly concentrated than in many emerging markets; average free float (as measured by the ASE) is about 40%. Family ownership is typical. In more recent studies, Zeitun and Tian (2007), Omran et al. (2008) and Jafar and Elshawa (2009) documented that the ownership in Jordan is concentrated in hand of family and institutions in particular. Also, foreign ownership is common and the government still has ownership in some firms.

Shareholders in Jordan typically are categorized into four main types: families, foreigners, government and institutions (banks and other institutions). The government ownership decreased after the privatization process, but is still available in a number of important

companies like Jordanian Airlines, Potash, Phosphate, and the Alrai newspaper. Unlike many developed countries (The US and the UK in particular), large institutional investors such as pension funds, trust funds, venture capitalists, and hedge funds) are not significant as controlling shareholders in Jordan (rather, the institutional investors are banks and other small institutions).

2.6. Gender diversity

Social and cultural structures in Jordan are different from those in Western societies in terms of barriers face female participation in the workforce. However, in recent years, opportunities for women in Jordan are increasing as globalization continues. Jordan is ranked the 77th out of 186 countries according to the Human Development Index (HDI) compared to the 86th level in 2003. Jordan has shown improvements in Gender Empowerment Measure (GEM) over the years. The GEM rose from 0.22 in 1995 to 0.297 in 2002. In 2009, Jordan's rank was 96 out of 109 nations. However, more improvements are needed.

The 2007 ratio of female to male earnings was 0.19; quite a low figure, since a ratio of 1; would indicate absolute equality. The number of female in government roles increased from 4.6% to 9.9% during the period between 1995 and 2002, showing that more improvement is being made in this area (Jordan Human Development Report, UNDP, 2011).

Total female employment participation increased from 28 percent in 2003 to 45 percent in 2013 (World Bank, 2013). Recently, MENA countries (Tunisia and Jordan in particular) are beginning to recognize the necessity of developing female talent up to the board level (Terjesen *et al.*, 2009).

The difference between genders is widely documented in the literature, especially with regards to managerial style, decision making and communication process (Ittonen *et al.*, 2011). The literature has shown considerable evidence for the importance of gender diversity for many aspects in organizations.

Due to the importance of gender diversity in the board, many countries take it into consideration. Some countries have determined a minimum number of directors' seats that should be allocated for females. For example, Sweden has proposed a legal requirement that 25% of board's seats should be allocated to female directors, Norway requires 40% of the board to be female (Gul *et al.*, 2011). Also, in its 2010 edition, the UK Corporate Governance Code recommends for giving due regard to diversity, including gender diversity, when searching for board candidates and making appointments to the board. However, the Jordanian regulations do not regulate gender diversity in the board so far, thus findings of this study may have some implications for policy makers.

2.7. Foreign ownership structure

Jordanian regulations offer open and equal opportunities for non-Jordanians to participate and invest in Jordan. Investment Promotion Law (1995) offers incentives for non- Jordanian investors in terms of freedom from customs duties, tax holidays, income tax exemptions and unrestricted transfer of capital and profits. Moreover, market stability and lack of taxes on capital gains and dividends attract foreign investors towards investment in ASE (Al-Qudsi *et al.*, 2007).

The foreign ownership concentration in ASE has increased drastically in the last few decades. The privatisation process that started in the 1990s plays an important role in shaping and adjusting ownership structures because it aimed to attract more private Arab and foreign investments by opening up the markets and abolishing state monopolies (ASE, 2013 and Zeitun, 2009).

Based on published figures from ASE and SDC, the ratio of foreign ownership (measured by market capitalisation) increased from 38% in 2003 to 51.3 % in 2013. The Saudi investments at the ASE ranked first among non-Jordanian investments; these Saudi investments reached about JD1.3 billion by the end of 2013. This figure constitutes 6.8% of the market capitalisation of the ASE, American investments ranked second with a percentage of 6.1%, followed by the Kuwaiti investments at 6.0%, the Qatari investments 4.5% and the Lebanese investments 4.0%.

However, according to the Instructions of Foreign Investment, the foreign investors are not allowed to own or participate, wholly or partially in a number of projects and activities which are: “passenger and freight road transportation services including taxi, bus and truck services, quarries for natural sand, dimension stones, aggregates and construction stones used for construction purposes, security and investigation services, sports clubs including the organisation of sports events services, excluding health fitness clubs services and clearance services” (Article 6).

2.8. Regulating Framework for the Auditing Profession in Jordan

The first Accounting Profession Law was enacted in 1961 followed by the first Company Law in 1964 and the first Commercial Law in 1966. Before these laws the commercial practises that were enacted by the Ottoman Empire in the 19th century were in use (Al-Akra et al., 2009). The 1961 Accounting Profession Law determined all the requirements that should be satisfied in order to have the right to exercise in the auditing profession, such as auditors should not have any other job other than auditing and they should have relevant experience. However, this law does not require a university academic degree or professional examination as a compulsory requirement for auditors to be licenced.

Globalisation, open markets, trade liberalisation, the privatisation process, and signing trade agreements with the US and EU put pressure on Jordan to change to the international accounting practices (Al-Omari, 2010). Many international institutions play an important role by helping and encouraging Jordan in that sense such as IASB, the World Bank, and the IMF (Al-Akra *et al.*, 2009; Al-Omari, 2010).

In 1985, the accounting profession in Jordan became more regulated: 1985 witnessed the enactment of the Certified Accounting Profession Law (before that date, the audit profession was not well regulated (Suwaidan, 1997)). As a result of this law, the Jordanian Association of Certified Public Accountants (JACPA) was established in 1987. JACPA aims to improve the audit profession by improving the competence of its members, emphasising on the independence of auditors and rules for the certification of public accountants, publishing accounting principles for the training and awareness of its members and developing accounting and auditing standards that could best meet the needs of the country. However, the JACPA did not have the power to impose IAS on companies or on its members until 1997

when the Companies Act No. 22 of 1997, and Securities Law No. 23 of 1997 have given consideration, authority and more power to JACPA (Al-Shiab, 2003). So, the adoption of IASs was not compulsory until 1998.

In 2003, a new Certified Accounting Profession Law was enacted. The 2003 law is regarded as an important step to improve and regulate the accounting profession (Al-Omari, 2010; Shanikat and Abbadi, 2011). By issuing this law, the JACPA got more power and played a significant role in encouraging the adoption and explaining the IAS/IFRS (Al-Akra *et al.*, 2009).

The aims of the new law are “regulating and upgrading the practice of this profession, ensure complete compliance and adherence with the approved standards of accounting and auditing in order to protect the national economy, upgrading the educational and professional level of chartered accountants, ensure complete respect and observance to the acceptable ethics and behaviours of this profession, enhancement of the role of chartered accountants by emphasising their neutrality and independence” (Certified Accounting Profession Law, Article 3).

According to the Certified Accounting Profession Law (2003), to be eligible to practice auditing, the person must have an academic degree, pass the professional exam (Jordan Certified Public Accountant JACPA), and must have seven years’ experience in auditing and accounting. Also, after being authorised, the auditor must attend 20 training course hours annually as a continuous learning in order to keep pace with latest updates².

² As a comparison, to be authorised auditing companies, in many countries, including UK and USA, the auditor should pass a relevant exam(s), should have experience and should proof that he/she up to date with the relevant regulations. These generally the requirements in many countries, including UK and USA, but you will find differences in structure of the exam, number of years as an acceptable experience or structure of the continuous improvement program. For example, in the UK, the auditor should be a member in ACCA, ICAEW, or ACPA

The international auditing and accounting firms – the Big-4 – are working in Jordan through affiliates except Deloitte. Allied accountant is a member of Earnest and Young, Qawasmi and Co. is a member of KPMG, and Bawab and Co. is a member of PwC. In addition to these offices, there are a number of large local audit offices like Abu-Ghazaleh, Professional auditors, Ghosheh, Arab professional, and Abbasi Co. Almost all the listed companies are audited by these audit firms (JACPA, 2015).

2.9. Factors affecting the development of accounting practices in Jordan

A number of factors played a role in the development of accounting practises and in adoption of IAS/IFRS. The following are the most important factors.

Political and economic factors: the political and economic situation in Jordan was unstable and at risk due to the Arab-Israel conflict since independence in 1946 until the date of the Jordan-Israel Peace Treaty in 1994. In addition to the Arab-Israel conflict and its consequences on the economic and financial development of Jordan, the Jordanian economy also witnessed many serious events such as the economic crisis of the late 1980s and the Gulf War's severe effects in the beginning of the 1990s.

To overcome the obstacles which faced its economy, the Jordanian government started with many economic and financial reform programmes. In order for the reform programmes to be successful, to improve the governance and disclosure system, and to increase confidence in the overall economy and financial environment to attract more investment, the Jordanian government enacted the most important regulations for the contemporary business and financial environment, which are: the Companies Act (1997), the Temporary Securities Act

(this membership after achieving the required conditions and passing the required exams. Also, the auditor should have experience in audit and proof 30 hours continuous professional development (CPD) per year.

(1997), and the Securities Act (2002). These laws set the framework for the corporate governance system, improved corporate disclosure and emphasised the adoption of IAS/IFRS.

Colonial influences: Given that Jordan used to be a British colony until 1946, this resulted in a strong economic and political relationship with the UK and all western countries in general. The colonisation effect and the post-colonisation relationship were facilitated and helped in transferring the British accounting culture to Jordan, and as a result, facilitated adoption of IAS/IFRS (Al-Akra et al., 2009).

Tax regulations: Income tax and sales tax (value-added tax) are the most important types of tax in Jordan. The Income Tax Laws 1985 and 2010 and Sales Tax Laws 1994 and its amendments require that all companies should prepare their accounts based on IAS/IFRS and send a copy of them to the tax department attached to the external auditor report.

Legal system: The countries' legal systems largely affect the adopted accounting systems in those countries (Al-Akra et al., 2009). Regarding its legal systems, the countries are categorised as either common law or code law countries (Salter and Doupnik, 1992). Common law countries are characterised mainly by strong investor protection and their capital markets are the main financing source. (Porta *et al.*, 1997). Jordan is classified as a code law country, so its sources of financing depend heavily on banks, and its investor protection system is weaker than common law countries.

Corporate financing in Jordan has largely been through banks, and shareholder rights are relatively weak (Al-Akra et al., 2009). However, Jordan's recent economic reforms, which targeted the build-up of the local economy and the attraction of foreign and local investment, require the government to lay down legislations to protect shareholders' rights and to increase confidence in the capital market (Al-Akra et al., 2009).

Nature of business ownership: Due to trade liberalisation and the privatisation process, government ownership has decreased and the number of shareholders increased including an increase in the number of foreign investors, and this has required more transparent disclosure from organisations.

Education: The existence of professionals who studied in different educational backgrounds, especially from Anglo-Saxon countries, influence the improvement of accounting practises (Solas, 1994). In addition, the quality of accounting education in Jordan has become better in recent years, especially for the post-graduate level, but it needs to be improved more, for instance by establishing appropriate guidelines associated with IFAC educational standards (Al-Akra *et al.*, 2009).

International factors: Many international factors encouraged Jordan to adopt IAS as a global benchmark such as globalisation, changes in capital markets, increases competitiveness and accelerated development in technologies (Solar, 1994 and Al-Omari, 2010).

2.10. Conclusion

This chapter surveys the Jordanian background and discusses the different economic and regulatory environment. The Jordanian environment has been presented in terms of the history of the country, history of the economy since independence, regulation development, regulatory bodies, financial market and listing rules, the development and factors affecting the accounting and auditing profession, ownership structures and the corporate governance system. An understanding of the Jordanian environment provides an insight into the research background, motivation, and research questions.

Consequently, it is important to mention that the financial market in Jordan is attractive for many reasons: (a) contrary to other Arab financial markets, the ASE is characterised by lack of any type of taxes or constraints; (b) the existence of many specialised bodies such as ASE, JSC and SDC which encourage increase the effectiveness and efficiency of the financial market and keep it away from probable financial crisis; (3) political stability in Jordan which makes Jordan a centre for business in the Middle East, especially after the recent public revolutions in the neighbouring countries. On the other hand, it is clear that the policy makers and financial market regulations emphasize corporate transparency, good governance, and high quality financial statements to maintain the market reputation and motivate investment in the capital market. Thus, retaining current foreign investors and attracting more are of particular interest to regulatory bodies in Jordan.

CHAPTER THREE: THEORITICAL FRAMEWORK

3.1. Introduction

A number of theories are playing an important role in interpreting and analysing different corporate governance practices, e.g. agency theory, stewardship theory, stakeholder theory, signalling theory, resource dependence theory, institutional theory, and information acquiring theory. Those theories vary from different aspects; each one is based on a different philosophy, discusses different items, and analyses and addresses the same case in different ways (Mallin, 2007; Solomon, 2011). Before going to these theories in detail, it is worth to mention about the theory of accounting in general.

3.2. Accounting theory- overview

As there are many theories of financial accounting, there is no universally agreed theory, or no even accepted views of how accounting theories should be developed (Deegan and Unerman, 2011). For instance, some researchers believe that the main role of accounting theory is to explain particular accounting phenomena, while other researchers believe that the role of the theory is to prescribe a particular approach to accounting (Deegan and Unerman, 2011).

Much of research in accounting is considered either positive research (the research which explains and predicts particular events) or normative research (the research which prescribes particular actions or activities). Positive (descriptive) theory is defined by Peirson and Brown, 1992: 326) as a theory “begins with some assumption(s) and, through logical deduction,

enables some prediction(s) to be made about the way things will be. If the prediction is sufficiently accurate when tested against observations of reality, then the story is regarded as having provided an explanation of why things are as they are. For example, a positive theory of accounting may yield a prediction that, if certain conditions are met, then particular accounting practices will be observed”.

Deegan and Unerman (2011) stated that while positive accounting theory typically based on observation, normative theory based on what the researcher believes should happen in a particular event. On other words, while positive theory seeks to analyse the observation and data at hand, and then derive a conclusion accordingly (deals and offer an explanation of the phenomena in question), normative theory seeks to describe what should be done in the future (provides a basis for predicting future actions).

The normative theory has been criticized by many researchers as it is not based on observation (observation-based research is considered to be scientific, and then akin to good research), but rather it is based on personal judgments about what should happen (Deegan and Unerman, 2011). For this research, the study explains the effect of different governance mechanisms and further suggests recommendations for policy makers for instance. This, therefore, makes positive/descriptive accounting theory is the main base for this study. On the other hand, this study offers (prescribes) number of recommendations for policy makers in particulars regarding corporate governance mechanisms under investigations i.e. this study offers information about the expected implication of particular actions for interested parties (recommend what may be done in the future). This also indicates that the result of the study, to some extent, can be explained using the normative theory framework.

Moreover, the positive accounting theory, which is mainly developed by Watts and Zimmerman (1986) explain why executive managers act particular behaviour or adopt

particular action. The main development of this theory is based on “rational economic person assumption”, which assumes that managers are motivated particularly by self-interest and will behave opportunistically to maximize their wealth (Deegan and Unerman, 2011). Thus, the self-interest assumption creates a need for organisations to establish alignment mechanisms to align principal and agent objectives e.g. corporate governance mechanisms and external auditing.

This assumption, therefore, is the backbone of the agency theory (and the rationale behind corporate governance regulations across the world). This has been discussed in the agency theory section below.

3.3. Agency theory

The agency relationship is one of the “oldest and commonest” organised ways of social life (Ross, 1973). It is a contract that has arisen between one or more persons, when one is considered as an agent doing services on behalf of others (principal) (Ross, 1973; Jensen and Meckling, 1976). Agency theory assumes that there is an inherent conflict between agent (manager) and principals (owners) of organizations, and its assumption is that the corporate governance problems stem particularly from the conflict of interests between these two parties (Jensen and Meckling, 1976; Fama and Jensen, 1983; Nicholson and Kiel, 2007). This consequently makes the alignment mechanisms of owners-managers’ interests the central focus of this theory.

The root of agency conflict was documented a long time ago by Adam Smith in 1776. Since Adam Smith identified the potential problem that results from the separation of management and owners in his book *The Wealth of Nations* in 1776, many researchers “have argued that

the working of a free market with private property would keep businesses and individuals who control them from abusing their power and would promote the most efficient use of the productive resources they control” (Blair, 1995, p.18). Due to size of the businesses at that time, the owners take the responsibility of managing and controlling their companies. This situation changed later on, particularly at the beginning of the last century. Berle and Means (1932) shed light on the dramatic changes in the ownership of companies and documented the separation of ownership and control in the large modern corporation, which, in turn, results in an agency relationship (Bebchuk and Fried, 2006).

Berle and Means (1932) pointed out that it is more beneficial for the owners to manage their businesses by themselves, but it is difficult in practice especially in the large modern corporations due to their complicated capital requirements (Clarke, 2004). Instead, owners just “invest their wealth in the corporation and design governance systems in ways that maximize their utility” (Davis *et al.*, 1997: 22). Assuming that owners may not qualified enough, they seek qualified and experienced managers, while managers at the same time need shareholders’ funds ((Shleifer and Vishny, 1997). Thence, owners make a contract with executives to manage their business on behalf of them. Based on this contract, shareholders accept uncertain and perhaps negative investment return (Fama, 1980), and agents accept the responsibility of managing principal’s investments and act rationally to maximize these investments’ value (Davis *et al.*, 1997).

Furthermore, based on the principals-agents’ contract, managers obtained a control right and discretion over the firms’ resources and, as Shleifer and Vishny (1997) reported, there may be constraints on this discretion in the contract in order to curb any harmful behaviour, and corporate governance is dealing with these constraints. This means that managers’ decisions are not always in the interest of shareholders and this consequently requires effective

governance mechanisms to keep managers' behaviour in check. The actions taken to deal with these constraints are costly and create what are called agency costs.

Agency cost comprises the "costs of structuring, monitoring, and bonding a set of contracts among agents with conflicting interests, plus the residual loss incurred because the cost of full enforcement of contracts exceeds the benefit" (Jensen, 1998: 153). When principals incur costs to monitor agents' behaviour, these costs are called monitoring costs, for instance, external audit costs, costs related to creating effective governance structures. The bonding costs are the costs that are borne to align agents' interests with principals (e.g. bonus incentives and/or reward structures) to curb or cure any costly actions taken by agents (Jensen and Meckling, 1976; Hoque, 2006)³. The third type of agency costs is the residual loss, and this is all other costs that are incurred due to the divergence between principal and agent decisions despite monitoring and bonding processes. Given that managers-owners' interests are not fully matched, any deviation of their interests is likely to create agency conflict problems and increases manager-shareholders' agency costs (Jensen and Meckling, 1976; Schulze *et al.*, 2003). Therefore, any increase in agency problems increases the demand of higher audit quality (Jensen and Meckling, 1976).

The demand of high audit quality is driven by two main factors; client incentives and client competencies to meet these incentives (DeFond and Zhang, 2014). Client demand for audit quality stems mainly from their incentives to reduce agency conflict in order to protect shareholders' wealth (Jensen and Meckling; DeFond and Zhang, 2014). Clients' competencies as a second main driver for audit quality are the abilities of clients to fulfil their incentives driven demand for audit quality (DeFond and Zhang, 2014). These abilities consist of mechanisms that facilitate meeting their demand for high- quality audit e.g. firms' board of

³ On the initiative of shareholders, the audit fees are considered as monitoring costs, whereas they are called bonding costs if they are engaged on the initiative of managers (Piot, 2001)

directors and audit committees, which are typically integral components of the corporate governance system⁴ (Beasley and Petroni, 2001; DeFond and Zhang, 2014). These two mechanisms are addressed below.

Information Asymmetry between principal and agent is the main source of agency conflict, and it is related to two main aspects of agency problems: moral hazard and adverse selection. Given that it is difficult for the principals to verify if the agent is acting in favour of or against their interests, and that most agents' activities are unobservable, moral hazard problem occurs as the agents may not act as agreed/contracted with the principal, and any investment decision taken by managers may reflect their interests rather than owners' interests (Eisenhardt, 1989; Shelfier and Vishny, 1997). Adverse selection arises mainly when a principal inadvertently contracts with an agent who is disqualified or less competent than principal's expectations (Eisenhardt, 1989; Chrisman *et al.*, 2004), or "when an employee has private information valuable to the agency in the sense that, if it were honestly revealed, would improve resource allocation" (Oldroyd, 2007: 182).

So, given that managers are assumed to be untrustworthy based on agency theory lens, they need to be effectively monitored as they may take decisions that maximize their own benefits and, at the same time, are against shareholders' interests. Therefore, shareholders work towards incurring control and monitoring costs in order to eliminate or decrease the principal-agent interests' divergence, and establishing a combination of fixed or performance-based incentives and punishments procedures for the agent (Fama and Jensen, 1983; Eisenhardt, 1989; Clarke, 2004). Eisenhardt (1989) stated that as a solution for mitigating the principal-agent conflict, agency theory proposes that corporate governance about create and monitor the mechanisms that are put in place by firms' owners to control

⁴ These mechanisms are triggered by Jordanian Corporate Governance Code (2008).

agents (management) in order to maximize shareholder value by reducing agency cost (Eisenhardt, 1989).

In order to mitigate the agency conflict, a corporate governance framework is developed to control management behaviour, and compel it to behave consistently with shareholders' interests by preparing high quality financial statements and reducing earning manipulation. External audit is one of the monitoring tools used by the directors to compel management to consider owners' needs. Therefore, based on agency theory proposition, effective board of directors and audit committees as important corporate governance mechanisms (Cohen *et al.*, 2002) play a dominant role in monitoring and controlling agents' behaviours, and consequently decrease the agency cost by alignment the principal-agent's interests (Jensen & Meckling, 1976 and Fama and Jensen, 1983). Further, external audit complements/supports board of directors and audit committee monitoring role by control managers and increase the current/prospective investors' confidence in the financial statements. This confirms that the theoretical legitimacy of audit function is reducing the agency cost as it reduces information asymmetry and therefore bridges the gap between owners and managers (Piot, 2001).

From another perspective, given that performance-based incentives for management is one of the common ways used to align principal-agent interests, managers (based on agency theory) tend to manipulate financial performance in order to obtain high rewards⁵. So, high quality auditors curb management's opportunistic behaviour and they are less willing to approve

⁵ Piot, 2001 summarized the managers' motivations to manipulate accounting numbers, which are to increase their reputation, to increase their remuneration and bonuses, to avoid takeovers, and to limit the implication of shareholders in the firm and keep a sufficient discretionary margin.

doubtful financial statements⁶ (Jensen and Meckling, 1976; Kane and Velury, 2004; Habbash, 2010).

Moreover, being the auditors provide a fair assurance about financial position, many researchers (Watts and Zimmerman, 1983; Cohen et al., 2002; Piot, 2001) documented that the external audit function is an essential component in the corporate governance mosaic and it plays an important role in mitigating agency conflict, and controls management's opportunistic behaviour. The essential point in performing the audit function effectively, as discussed by Watt and Zimmermann (1983), is the ability of auditors to discover and report any material breach in the financial statements (so called audit quality). Becker et al., (1998) stated that auditors reduce information asymmetries and allow outsiders to verify the validity of financial statements. Thus, credible audit quality acts as an effective deterrent to financial statement fraud because management's reputation may be damaged and firm value adversely affected if misreporting is revealed.

On the other hand, board of directors and audit committee play a significant role in demanding and monitoring the external auditing. Effective board of directors and audit committees (as indication of client competency) are interested to demand high audit quality in order to protect their reputation and to avoid legal accountability by decreasing the likelihood of fraudulent financial reporting. Also, high-quality audit helps in controlling management misbehaviour and then maintain shareholders' interests which is the ultimate target of corporate directors. Further, external auditors provide a high-quality audit in order to

⁶ Given that the opportunistic managers may not disclose the correct performance/financial position of the company, which in turn leads to residual loss to the shareholders, auditors play an important role in control managers (Jensen and Meckling, 1976; Suliman, 2011), and increase the current/prospective investors' confidence in the financial statements.

satisfy the effective boards' expectations and to maintain a good relationship with their clients (Carcello *et al.*, 2002 and Beasley, 1996).

In summary, the agency theory is the underlying rationale of corporate governance code as the key purpose of corporate governance regulations is to monitor management's behaviour. So agency theory provides explanations and solutions for owners-managers' agency relationship which give it a priority over other theories (Dinga *et al.*, 2009). In addition to this, agency theory is the most dominant theory in accounting and finance research. It is an easily understandable (Eisenhardt, 1989) and simple theory because it classifies the organization into two participants (agents and principals) with clear interests for each of them. Also, it is based on the philosophy of human nature with respect to the wealth maximization instinct (Daily *et al.*, 2003). As a result, the agency theory is the main perspective within which this research is being carried out.

After discussing agency theory, it is worthwhile to present other theories which are common in the corporate governance literature, and assess their relevance to the study. These theories are stewardship theory, stakeholder theory, resource dependence theory, institutional theory, and information acquiring theory.

3.4. Stewardship theory

While agency theory assumes a conflict between owners (principals) and executive managers (agents), stewardship theory assumes that there is no conflict of interests between these parties. Instead, it assumes a convergence due to their sharing joint collective interests (Donaldson, 2008; Van Slyke, 2007). Stewardship theory proposes that managers act as stewards of the principals' resources, exert their best efforts towards protecting and

maximizing the principals' utilities, and they, therefore, give priority to the principal interests over their own interests (Davis et al., 1997; Mallin, 2007).

Stewardship theory focuses on collaborative and empowering structures within the company, which is contrary to monitoring and control structures that are assumed by agency theory. So, stewardship theory suggests that the stewards (CEOs) work towards pro-organizational activities, achieve shareholders objectives and enhance the corporate performance when they have high authority e.g. when the chairman and CEO position is held by the same person (Davis and Donaldson, 1991). In addition to suggesting unifying of the role of CEO and the chairman, this theory assumes that boards of directors which are dominated by executive members are more beneficial for the company. This is because they have more business operation knowledge about the company and have more loyalty than non-executive or independent members (Muth and Donaldson, 1998).

The proponents of stewardship theory stress managers' tendencies to be collectively oriented and intrinsically motivated. As stewards, managers focus on cooperative decision making and goal alignment (Sundaramurthy and Lewis, 2003). Hence, they may be trusted to "behave in ways that are consistent with organizational objectives" (Davis et al., 1997: 25). However, given the advantages of this collaborative approach, what makes it applicable or not applicable to a corporate context depends on the risks that the principals are willing to assume (Davis et al., 1997). For instance, risk-averse principals perceive that executive managers are self-serving (this assumption is implied in the corporate governance code) and therefore they prefer monitoring prescriptions (Davis *et al.*, 1997).

To assess the relevance of this theory for the context of the study, it is worth mentioning that the key purpose of corporate governance regulations is to monitor management's behaviour. These regulations have been enacted as a reaction to high-profile corporate scandals e.g. the

Maxwell and Enron scandals were the main motivation for the Cadbury Report (1992) and SOX (2002) respectively. In Jordan, the corporate governance code (2008) heavily focuses on the responsibilities of boards of directors and audit committees as “monitoring” rather than “empowering” mechanisms of the executive managers. This is consistent with the common notion that the effect of agency theory is contributory in the development of corporate governance code around the world (Habbash, 2010).

Thus, given that this study is interested in examining the effectiveness of the corporate governance code, adopting the monitoring view of agency theory is more appropriate than the empowering view of stewardship theory. Also, it should be noted here that the results of the study challenge assumptions of stewardship theory e.g. the non-executive directors are more beneficial to the companies than the executive ones, and unifying of the role of CEO and the chairman has no significant contribution.

3.5. Stakeholder theory

Study of the stakeholder approach has grown since the first use of the term in 1963 at the Stanford Research Institute by Igor Ansoff and Robert Stewart, when they defined stakeholder as “those group without whose support, the organization would cease to exist” (cited in Freeman, 1984; Clarke, 1998). Also, stakeholder theory was originally detailed and developed by Freeman (1984) in his book “*Strategic Management: A Stakeholder Approach*”; he defines stakeholder as “any group or individual who can affect or is affected by the achievement of the organization’s objectives” .

Stakeholder theory assumes that “all persons or groups with legitimate interests participating in an enterprise do so to obtain benefits and that there is no prima facie priority of one set of

interests and benefits over another” Donaldson and Preston (1995, p.68). Collier (2008, p.951) concluded that “Boards of directors in quasi-public organizations have both an economic concern with efficiency and a broader social concern”. So, based on stakeholder theory, the organization has obligations for all its stakeholders, and it should be run to benefit all of them, not for maximizing their shareholders’ utility only. The goals of the firm should be achieved by creating a proper balance between the interests of all stakeholders (Freeman, 1984; Heath and Norman, 2004). Shankman (1999) also report that such balancing is the “only way” for the company to achieve its objectives and to stay alive. The breakdown of corporate relations was one of the main reasons behind the failure of Enron and other corporations in the 2000s (Heath and Norman, 2004).

Clarkson (1995) classified the stakeholder groups into primary and secondary groups based on its importance to an organization: primary stakeholders are the most important groups and they are essential for an organization to survive. The board of directors and management of the company must strive to create a proper satisfaction for each of these groups. If any of these groups disappeared from the organization system, continuity of the organization would be seriously affected. These groups include shareholders and investors, employees, customers, suppliers, and governments and communities which provide infrastructures for the corporate activities. Secondary stakeholders, Clarkson reported, are groups who can affect or be affected by the company’s activities, but they do not have any direct economic transactions with the company and their presence is not necessary in the corporate life cycle, e.g. media, general public and research centres.

A stakeholder theory of the organization based on diverse economic doctrines, discussed and presented in many different ways (Clarke, 1998). Donaldson and Preston (1995) documented three approaches to discussing the stakeholder theory (descriptive, instrumental and

normative). The descriptive approach discusses the behaviour, actions and communication of the company's management towards the stakeholders. The instrumental approach examines how the management achieves the corporate goals taking stakeholders' interests into consideration. Finally, the normative approach focuses on how the company attains its goals considering moral and ethical norms.

By taking the context of this study into consideration, it is important to point out that though the stakeholder theory explains the relationship between the business entities and their different groups of stakeholders, it is not appropriate when assessing the matter under investigation. The public companies have different stakeholders, but the study focuses on one of the important stakeholders - the shareholders.

Furthermore, using stakeholder approach depends on a country's laws, traditions, and corporate structure. In most of the governance systems around the world, the Jordanian one included, the priority is obviously shareholders and the maximisation of their interests. While other corporate governance systems, Germany as an example, view whole company-related parties as collective partners, and the employee and banks, who provide the finance, are represented in the board of directors (Mallin, 2007), this is not the case in Jordan. The stakeholder approach, therefore, is not appropriate for the context of the study.

3.6. Theory of information acquisition costs

A strong information environment provides independent directors with easy access to required information about the organisation (in turn, less cost of acquiring information) which is important to monitoring and control (Duchin *et al.*, 2010; Zhang and Yu). (Raheja, 2005; Harris and Raviv, 2008; Duchin *et al.*, 2010) indicate that independent directors obtain

rich information of firm's business operations and, in turn, increase their effectiveness when the company works in a strong information environment and directors have easy access to the relevant information. Zhang and Yu, (2016) pointed out that better-informed independent directors, who are aware of firm risks and operations, are likely to ask more questions and request greater effort from the auditor to protect the firm's value.

However, Duchin *et al.* (2010) find that the effectiveness of the independent outside directors depends on the cost of acquiring information. That is, independent directors are expected to play an effective monitoring role only in a stronger information environment and where the cost of acquiring information is low (Zhang and Yu, 2016). Thus, in a weak information environment (e.g. Jordan), independent directors have difficulty in obtaining relevant information to effectively perform their responsibilities through higher audit quality for instance (Zhang and Yu, 2016).

3.7. Resource dependence theory

Another theory reviewed in the corporate governance literature is resource dependence theory. The essential assumption of resource dependence theory is the need for environmental connections between the organisation and outside resources (Yusoff and Alhaji, 2012). In this perspective, outside directors serve to link the organisation with external environment by co-opting the resources needed to survive (Salancik and Pfeffer, 1978). So this theory offers a theoretical framework for directors' resource role (Daily and Cannella, 2003).

Proponents of this theory highlight the value of board members as “boundary spanners” of the organization and its environment (Dalton *et al.*, 1999; Hillman *et al.*, 2000; Daily *et al.*,

2003). In this role, non-executive directors provide a vital set of resources needed by the organisation which are therefore important, to enhance organizational functioning, performance, and survival (Daily and Cannella, 2003).

Hillman *et al.* (2000) consider the potential result of linking the organisation with the external environment and decreasing uncertainty which is also minimising the transaction cost associated with the external association. Resource dependence theory supports the appointment of directors to multiple boards as this creates the opportunities to gather information and build network (Yusoff and Alhaji, 2012).

Cohen *et al.*, (2008) posit that boards of directors help management in setting corporate strategy, and management also relies on the board to access scarce resources. So the primary role of the boards of directors under this framework is less that of a monitor than a partner to management (Cohen *et al.*, 2008).

It can be concluded that this theory stresses the importance of the “advisory role” (Daily and Cannella, 2003) and “linking role” (Hung, 1998) of the non-executive directors, rather than adopting the “controlling and monitoring role” as the agency theory assumes. Also, the rationale behind recruiting non-executive directors, as recommended in the JCGC, is to monitor and control management in order to behave in favour of shareholders’ interests by preparing high quality financial statements (i.e. the code implies that the non-executive directors are in the best position to control management behaviour given that they are outsiders and free from management pressure and intervention).

3.8. Institutional theory

Institutional theory originated in the social sciences (Scott, 2005), and has been further developed in the sociological literature of organisation and organisational behaviour. This theory helps to reveal the nature of the interaction between different governance players emphasising a “substance over form” view (Cohen *et al.*, 2008). Also, this theory considers organisations as cultural and social systems not just as a means to provide goods and services (Judge *et al.*, 2008).

DiMaggio and Powell (1983) and Cohen *et al.*, (2008) pointed out that organisations become similar over time through the process of institutional isomorphism as organizations adapt and become similar to those around them: this homogeneity occurs as mimic other organizations to enhance their legitimacy. Institutional theory also proposes that there is a tendency to attract homogeneous individuals into organisations (Tuttle and Dillard 2007). The implication for corporate governance is that board members who come from similar backgrounds will be less inclined to challenge management or indeed, each other (Cohen *et al.*, 2008).

DiMaggio and Powell (1983) identified three mechanisms through which institutional isomorphic change occurs: Coercive isomorphism, normative isomorphism, and mimetic isomorphism. Coercive isomorphism comes from political influence and the problem of legitimacy. It results from pressures exerted on organisations from government and other organisations. Mimetic isomorphism reflects environmental uncertainties (responses to uncertainty); if organisations face uncertain situations for example ambiguous aims, unclear solutions, or incomprehensible new technology, they mimic and follow other organisations which are viewed as successful and legitimate: this happens whether those organisations have

effective practises or not. The route is chosen simply because it is more convenient and less expensive.

Normative isomorphism suggests isomorphism is associated with professionalization or effectiveness. DiMaggio and Powell (1983: 151) also, discussed two sources of professionalization that are important in isomorphism; “one is the resting of formal education and of legitimation in a cognitive base produced by university specialists: the second is the growth and elaboration of professional networks that span organizations and across which new models diffuse rapidly. Universities and professional training institutions are important centres for the development of organizational norms among professional managers and their staff”.

Corporate governance considers all matters that contribute to shareholders’ wealth and organisations values, from management to the board of directors, from stationary requirements and financial markets structure, to more broad understandings of corporate culture in the modern context: this sociological perspective, as Davis (2005) argued, is more relevant and promising for corporate governance research than the more traditional perspective as it seeks to understand the institutional context in which it occurs.

Institutional theory focuses on the deeper and more resilient aspects of social structure (Scott 2005). It tackles the systems of social beliefs and practices that are associated with diverse functional areas of societal systems, such as religion, politics, norms, and regulations (Filatotchev and Nakajima, 2010); therefore, one of the keys to understanding organizations

is the study of the institutional environments that guide or constrain their legitimacy (Judge *et al.*, 2008; Adegbite, 2010; Filatotchev and Nakajima, 2010).

Cohen *et al.*,(2008: 187) discussed the implication of institutional theory with respect to the internal workings of the board and suggested that “audit committees’ members will act to conform to other institutions and that they will tend over time to become similar to others within the same industry. Audit committees’ members are likely to come from similar backgrounds, often similar to the backgrounds of management as well. This theory has an indeterminate prediction on whether the audit committee will act as an ally to management or the auditor in disputes that the auditor may have with management. For example, the audit committee often fulfils an important symbolic role that in practice could lead its members to legitimize their role by asking questions of management. However, similar backgrounds and ties with management may lead the audit committee to accept management’s views”.

This is contrary to agency theory which assumes boards of directors or audit committees’ members to be independent and to exert an effective monitoring role over management. Beasley (2009) and Cohen *et al.* (2008) argued that institutional theory emphasizes the ceremonial role of corporate governance structures in creating legitimacy: it considers how governance structures attain ritualistic roles that help legitimize the interactions among the various players within the corporate governance structure and aids the communication of this to external parties. Under this theoretical view, board of directors and audit committee have no effective power over management and their role is passive and symbolic rather than active, i.e. board of directors and/or audit committee do not necessarily play effective monitoring role.

DiMaggio and Powell (1983) and Cohen *et al.* (2008) pointed out that a firm may comply with the corporate governance practices just to simulate other firms, or to meet the regulations without substantial impact on these governance practices. This study assumes that corporate governance practices in Jordan are effective and companies are not complying merely to mimic other companies. The findings of the study also highlight the effective role of the corporate governance mechanisms in ensuring high audit quality. However, some evidence could be explained by institutional theory. For example, frequency of boards of directors and audit committees' meetings shows no effect on audit quality. This suggesting that more number of meetings might be unduly and, therefore, may not necessarily indicate board diligence. The number of conducted meetings may be just to simulate other firms or to meet the code recommendations.

3.9. Conclusion

A number of theories have been reviewed in the corporate governance literature. This chapter discussed the common and the most important theories in this field (Solomon, 2007; Mallin, 2011) which are agency theory, stewardship theory, stakeholder theory, resource dependence theory, institutional theory, and information acquiring theory.

As the agency theory is the underlying rationale of corporate governance code, it can be concluded from the above discussion that the agency theory is the main perspective within which this research is being carried out. Though the agency theory is criticized as it presents a partial view of the world and ignores a complexity of organizations (Eisenhardt, 1989); it is still the dominant theoretical perspective adopted in the literature. It "has been the

predominant paradigm for understanding and explaining corporate governance issues” (Rubach and Sebora, 1998: 245). Furthermore, Adegbite et al., (2012: 397) concur stating agency theory “whilst its assumptions may be considered restrictive in cross-national application, they nevertheless remain absolutely valid and worthy precursors for conventional orientations towards corporate governance”. Thus, the agency theory continues to remain important as a starting point for any corporate governance discussions (Adegbite, 2010) and for building any corporate governance framework (Lubatkin *et al.*, 2007).

CHAPTER FOUR: CORPORATE GOVERNANCE AND AUDIT QUALITY- LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Part one: Literature review and hypotheses development (first empirical model)

4.1.1. Introduction

This part covers a discussion of audit quality and its measurements, and a critical literature review in relation to corporate governance practices and audit quality, particularly boards of directors' and audit committees' characteristics. Discussion of the different ownership types in Jordan and their effect on audit quality has been presented. In addition, this chapter includes the hypotheses that are developed with respect to the first empirical model.

4.1.2: corporate governance⁷ and audit quality

4.1.2.1. Audit quality: its importance and measurements

The agency problem that arises between owners and managers, due to information asymmetry between them, is the main motivation for external audit. External audit is an important requirement for any economic entity, and it is considered one of the corporate governance's cornerstones (Cadbury, 1992). Audit purpose "...is to

⁷ Boards of directors and audit committees as important corporate governance mechanisms

enhance the degree of confidence of intended users in the financial statements. This is achieved by the expression of an opinion by the auditor on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework” (International Standard of Auditing (UK and Ireland) 2004: 2).

External audit function plays a significant role in corporate governance system as it bridges a gap between those who prepare financial information (management) and those who use it (shareholders). It is considered as a key monitoring device because it enhances the quality of financial statements, safeguards the shareholders’ interests, and helps the investors for their investment decisions and by giving them confidence about company’s status (Cohen *et al.*, 2002; Habbash, 2010; Brown *et al.*, 2011).

Moreover, Jensen and Meckling (1976) argued that because of the agents act towards maximizing their own benefits even at the expense of principals and because of the information asymmetry between agents and principals, external auditors have a duty to convergence the principal- agent interests and to reduce the information asymmetry between them. Consequently, in case of large agency problem, it is expected that auditors will spend more effort in auditing activities (delivering higher audit quality).

Francis *et al.* (1999); Becker *et al.* (1998) stated that as the accrual based accounting tempts managers to opportunistically manipulate financial statements, the main role of external auditors is to curb such opportunistic behaviour and to provide a credible auditing services for contracting and for outside shareholders. For this reason, agency theory is employed theoretically to legitimate the reason why external auditing is

essential in the modern economy (Jensen and Meckling, 1976; Arnold and De Lange, 2004; Sulaiman, 2011).

External auditors also have a vital role in mitigating the principal- principal conflict not only the conventional principal- agent conflict. For instance, In developing countries where the companies are characterised by concentration ownership which in turn increases the agency problem, the external audit function would create confidence and assurance that the interests of minority shareholders are sufficiently protected from exploitation by controlling shareholders (Fan and Wong, 2005).

The external audit function was imposed by regulations a long time ago (since 1900 in the UK and 1933 in the US) (Watts and Zimmerman, 1983). In Jordan, the first Accounting Profession Law was enacted in 1961 (British code was used before). In 1987, the Jordan Association for Certified of Public Accountant (JACPA) was established in order to improve the audit profession in Jordan. The law emphasized the independence and competency of auditors and rules for certified of public accountants. However, the JACPA did not have the power to impose IAS on companies or on its members until 1997 when Companies Law No. 22 of 1997, Securities Law No. 23 of 1997 have given consideration, authority and more power to JACPA. The audit environment became more regulated after enacting these regulations. These regulations require all listed companies to have their accounts audited by an independent auditor, and to disclose the annual audit fees in their annual financial reports.

In Jordan, international accounting firms (Big 4 auditors) work through local affiliates, except *Deloitte*. Allied accountant is member of *Earnest & Yung*, Qawasmi & Co. is

member of *KPMG*, and Bawab & Co. is member of *BwC*. In addition to these firms, many local audit firms also play important role in Jordanian audit market. Obaidat (2007) documented that Jordanian auditors are complied with international standards of auditing (ISA). However the compliance level was different; the highest level of compliance was 90% regarding audit evidence and audit documentation standards, and lowest level of compliance was 70% which is regarding (the auditor's responsibility to consider fraud in an audit of financial statements".

As previously noted, the audit function plays a vital role as an important part of the corporate governance mosaic. However, the effectiveness of the auditor role depends mainly on the audit quality provided. The audit quality concept has been defined in the literature from different perspectives. It can be defined as a process of detecting and reporting material misstatement (DeAngelo, 1981), the ability to detect and eliminate material misstatement (Davidson and Neu, 1993), and the ability of the auditor to provide precise information regarding corporate assets (Titman and Trueman, 1986). To assure financial reporting quality, DeFond and Zhang (2014) extended the definition of audit quality beyond the simple detection of accounting standards' violations, to show how faithfully the financial statements reflect the firms' underlying economics. Regardless of differences in the definitions of audit quality, there is no doubt about its importance in minimising agency costs and increasing investors' confidence by enhancing the credibility of financial information.

"A higher quality audit should improve the quality of financial reporting and reduce the risk of the auditor providing an incorrect audit opinion" (Goodwin - Stewart and Kent, 2006: 387). High-quality accounting information has an important role in developing and increasing confidence in financial markets (Francis *et al.*, 2003).

Therefore, it seems plausible to say that high-quality audit is an important component of well-functioning financial markets.

Providing high-audit quality is function of two components; auditor incentives for independence and auditor competency (Watts and Zimmerman, 1983). Auditor competency is related to auditor ability (auditor to be qualified) to supply high-quality audit. Auditor independence refers to auditor incentives that include reputation and litigation concerns (Dye, 1993; DeFond and Zhang, 2014). Jeong and Rho (2004) argued that when the institutional setting does not demand or is less interested in audit quality, auditors likely evade providing credible audit quality, so they exert less effort to curb management misbehaviour as well as possibly behaving opportunistically to retain/attract more clients.

Audit regulations in Jordan play an important role in ensuring that auditors and competent and independent. According to the Certified Accounting Profession Law (2003), to be eligible to practice auditing, the person must have an academic degree, pass the professional exam⁸ (Jordan Certified Public Accountant JACPA exam), and must have seven years' experience in auditing and accounting. Also, after being authorised, the auditor must attend training courses no less than 20 hours annually as continuous learning in order to keep pace with latest updates. Moreover, the regulations ban auditors to provide -at the same time- most of non-audit service for the same clients in order to maintain their independence.

On the other hand, the litigation risk concern in Jordan is weak compared to developed contexts; and this decreases the auditor's incentive to perform high audit

⁸ Even those who have CPA or ACCA, they need to do the local exam in order to be certified auditor in Jordan.

quality. Investors in Jordan do not normally complain against auditors, and there are no common lawsuits cases against auditors (JACPA, 2015). This consequently increases importance of effective (competent) boards of directors and audit committees to ensure that the auditors are delivering credible audit quality.

Furthermore, audit quality in Jordan obtained more attention at the end of the 1980s alongside starting the economic reform programme. At this period the government launched a privatisation programme, and the main aims are enhancing the efficiency and productivity of the targeted enterprises, creating a suitable environment for investment to attract the external investors, and strengthening the economy and financial market by this long-term investment (ASE, 2012). Later in 2008, the Jordan Securities Commission issued the Jordanian Code of Corporate governance (JCCG) with main targets also to increase confidence in the capital market by increased efficiency of their members (listed firms). Consequently, high audit quality is required to retain and attract investors, and to boost confidence in the financial market. This motivates this study to test whether the JCCG recommendations (regarding boards of directors and audit committees in particular) have any effect in improving audit quality (this has been translated to the first research question).

In summary, it is difficult to assess audit quality *ex ante* because the amount of assurance provided by auditors is unobservable. The only observable outcome of the audit process is a common form of audit reports and most of these reports are standard clean opinions (Francis, 2004). Therefore, an important development in audit quality research is based on the premise that ‘differences’ in audit quality exist and can be measured by comparing different classes of auditors, their industry specialisation, or level of audit fees (Francis, 2004). Therefore, as most commonly

found in the literature, DeFond and Zhang (2014) categorised audit quality models into: auditor-specific characteristics such as auditor size (captured by Big *N* audit firms) and industry specialisation, and auditor–client contracting features such as audit fees. These models are discussed below.

4.1.2.1. Audit fees

The amount of fees paid to the external auditors is largely used in a high-profile literature as an indication of audit quality (O'Sullivan, 2000; Felix Jr and Gramling, 2001; Carcello *et al.*, 2002; Abbott *et al.*, 2003; Goodwin - Stewart and Kent, 2006; Singh and Newby, 2010; Zaman *et al.*, 2011).

Theory predicts that higher audit effort increases the probability of detected errors (Shibano, 1990; Matsumura and Tucker, 1992; Dye, 1993), implying an adverse correlation between audit effort and financial reports' restatements. Shibano (1990) developed a model which connects audit quality to the likelihood of misstatements. His model demonstrates that the auditor can increase the likelihood of detected misstatements through higher audit effort. Thus, the robust models that are developed by Dye (1993) and Hillegeist (1999) suggest that auditors who exert more auditing efforts are more likely to detect earnings management and generate high-quality financial statements.

Testing the association between audit fees and audit effort is likely to aid the understanding of quality ((Johnson *et al.*, 2002; Srinidhi and Gul, 2007). It is reasonable to argue that when an external auditor charges a premium fee to a client

this will be associated with a better quality of services provided (Palmrose, 1986). This is supported by Hribar *et al.* (2014) who tried to develop a measure of accounting quality based on audit fees, and concluded that audit fees can be used to provide a reliable measure of a firm's accounting quality.

High level of audit fee implies higher audit quality, *ceteris paribus*, which is either through more audit effort exerted (i.e. more audit hours) or through greater expertise of the auditor (higher billing rates) (Francis, 2004). As audit effort is the dominant factor priced in audit fees (Mande and Son, 2015), this makes audit fees a reliable indicator of audit quality because higher fees indicate that the auditor worked more hours, signalling greater effort (Eshleman and Guo, 2014; Zhang and Yu, 2016).

Sampaio *et al.*, (2015) investigates the relationship between audit fees and quality of the audit services rendered to the 300 Brazilian firms in the period between 2009 and 2012. Their findings confirmed that audit fees is a reliable measure of audit quality, and in particular they stated that more aggressive earnings management is related to lower audit fees paid to auditors.

Moreover, In his study, O'Sullivan (2000) used the amount of the audit fee as a proxy for audit quality as the quality of a company's audit is not observable. He justified this proxy as it is reasonable to expect that more audit investigation will require more audit hours and/or the use of more specialised audit staff — resulting in higher fees. Further, the link between audit quality and fees has been raised both by Cadbury (1992) and the Chartered Accountants' Joint Ethics Committee (1993) — both reports warning against the likelihood that audit quality may be compromised by low fees.

In support of the above views, Lynn Turner (2005)⁹, former Chief Accountant at the Securities and Exchange Commission (SEC), wrote:

Certainly throughout the 1980s and 1990s, corporations, sometimes with the assistance of their audit committees, twisted the arms of independent auditors to reduce their audit fees. Our experience includes corporations who competitively bid their independent audit work solely to reduce their fees well below levels that could generate a reasonable return for the auditors. In turn, the audit firms reduced the level of work they needed to perform in their role as gatekeepers for investors. Inevitably inferior audits resulted.

There is also empirical evidence supporting this argument in the literature. Prior research confirms that larger audit fees reflect high audit quality through greater audit effort (Caramanis and Lennox, 2008; Zaman et al., 2011; Carcello et al., 2002; Abbott et al., 2003; Bliss, 2011; O’Sullivan, 2000). Audit fees level is correlated positively with more audit effort which influences the ability of the auditors to discover material misstatements (Elitzur and Falk, 1996; Frankel *et al.*, 2002; Lobo and Zhao, 2013), constrains earnings management (Caramanis and Lennox, 2008; Blankley *et al.*, 2012), increases earnings response coefficients (ERCs) (Higgs and Skantz, 2006) and increases accrual quality (Su *et al.*, 2007; Mande and Son, 2015).

A study by Caramanis and Lennox (2008) examined the role of effort exerted by auditors in improving earnings’ quality. By analysing a database of hours worked by auditors on 9,738 audits in Greece between 1994 and 2002, their findings revealed that lower audit hours are associated with positive and larger abnormal accruals. Also, with lower audit effort, managers are more aggressive in managing earnings in order to meet or beat the earnings benchmark. The researchers summarised that lower audit effort gives managers an opportunity to aggressively manage their reported earnings.

⁹ Comment letter to the Securities and Exchange Commission in 12/4/2005, p.5. Available at: <http://www.sec.gov/spotlight/soxcomp/soxcomp-turner.pdf>

Moreover, Eshleman and Guo (2014) examined whether audit fees are related to audit quality. By using a sample of 1,670 firm-year observations spanning 2000-2011, and employing a OLS regression, they examined the association between audit fees and the likelihood of firms using income-increasing discretionary accruals to meet or beat the consensus EPS forecast. Their findings reported that clients paying higher audit fees are significantly less likely to use discretionary accruals to meet or beat the consensus analyst forecast.

Blankley, Hurtt, and MacGregor (2012) reported an adverse relationship between audit fees and the probability of financial statements' restatement in the post-SOX years. This is consistent with auditors who obtain more fees performing more thorough audits, and thus leading to a lower probability of misstatements. This result is consistent with a study achieved by Lobo and Zhao (2013). By using the misstatement detection model and considering a sample of US annually and quarterly financial statements from 2000 to 2009, Lobo and Zhao (2013) after correcting misstatement risk bias, reported a robust negative relationship between audit fees and annual report restatements.

Frankel, Johnson and Nelson (2002) analysed a set of data collected from 3,074 proxy statements filed with the SEC between February 5, 2001, and June 15, 2001 to examine whether auditor fees are associated with earnings management in particular. They found that audit fees level is adversely correlated with earning management. The result is confirmed by (Larcker and Richardson, 2004) which reported that accrual is negatively related to total audit fees.

The most recent empirical evidence about the relationship between audit fees and accrual quality¹⁰ is a study by Mande and Son (2015). By estimating accruals quality using an industry-level pooled cross-sectional model for a large sample consisting of 25,470 firm-year observations, Mande and Son (2015) confirmed the results reported by Srinidhi and Gul (2007), showing that in the pre-SOX years, higher audit fees denoting higher effort imply higher accruals quality. This finding also stays significant in the post-SOX years but in less strength.

Li and Ma (2015) tested the relationship between audit fees and accounting misstatements in China where auditors' legal liability is essentially weak. Using the misstatements from annual reports of listed firms between 2001 and 2010, their result showed that current year audit fees are negatively and significantly associated with the probability of current year financial statements being misstated. This result is in line with prior research which is mainly from the US. This indicates that higher audit fees can also reflect audit effort in a context where no strong litigation risks exist.

On the other side, large audit fees paid may make auditors more economically dependent on their clients and affect their independence (Magee and Tseng, 1990; Becker *et al.*, 1998). Such financial dependency may create a relationship whereby the auditors become reluctant to make proper inquiries during the audit process due to their fear of losing highly profitable fees (Hoitash *et al.*, 2007). Low audit fees might not reflect lower audit quality because the statutory audit service might be used as a “loss-leader” in order to gain a higher profit margin on non-audit fees (Hillison and Kennelley, 1988). Also, audit fees levels may reflect the negotiation power between

¹⁰ The authors used ‘accruals quality’ and ‘audit quality’ interchangeably throughout the paper. They relied on the direct link reported between high quality audits and high quality accruals by Caramanis and Lennox (2008), Dechow *et al.* (2011) and Gunny and Zhang (2013).

audit firms and their clients rather than audit quality (Asthana and Boone, 2012), or reflect litigation (and reputation) risk premium (DeFond and Zhang, 2014).

However, Lin and Hwang (2010: 70) carried out a meta-analysis study about the relationship between audit quality and earnings management. They analysed 48 prior studies, published in high profile journals, and stated that there is strong evidence suggesting that as the audit fees increases, the benefit of the greater audit efforts outweighs the potential adverse outcomes i.e. economic bond or independence impairment. They further concluded that “the results seems to be consistent with the notion that when the auditor provides a better quality of audit, as reflected in a higher audit fee, earnings management is less likely”.

In summary, there is a clear evidence that higher audit fees are indicative of greater auditor effort and thus a credible audit quality. Conversely, low audit fees level denotes less audit work and, hence, lower audit quality. Also, Increasing audit effort is a way auditors can respond to a heightened risk of financial reports misstatements and earnings management (Francis and Krishnan 1999; Eshleman and Guo, 2014; Blankley, Hurtt, and MacGregor, 2012). This view is echoed by the Public Company Accounting Oversight Board (PCAOB), which targets firms with low audit fees relative to other firms in the same industry, when deciding which external audit firms to review (Bockwoldt, 2010 cited in Eshleman and Guo, 2014). The PCAOB assumes that companies that pay low audit fees receive low-quality audits. Finally, the audit fee model typically shows greater explanation power (well-specified with R-square exceeding 70%), which decreases concerns about correlated omitted variables (Ghosh and Tang, 2015).

4.1.2.2. Size of audit firms

The relationship between the size of audit firm and audit quality has been widely investigated. A number of prior empirical evidence supported the view that the Big *N* audit firms provide higher quality audits (DeAngelo, 1981; Palmrose, 1988; Krishnan and Schauer, 2000; Fuerman, 2004; Al-Ajmi, 2009; Francis and Yu, 2009).

Big *N* audit firms have ability and incentive to deliver a high audit quality because they have greater reputations to protect and high litigation risk in case of audit failure (Francis, 2004). When these audit firms have 'more to lose' from supplying a lower-than-promised level of audit quality, clients properly use size as a quality surrogate (DeAngelo, 1981; Francis, 2004; Khurana and Raman, 2004). Sulaiman (2011) stated that big *N* audit firms tend to be more conservative in their work because they have more incentives to reduce litigation risk which also protects their reputation. Moreover, Big *N* audit firms have adequate human and technology resources which increase their ability of more intensive and powerful audit tests. Also, Big *N* audit firms are more independent of their client (DeAngelo, 1981) and have a high standard control system (Khurana and Raman, 2004; Francis, 2004). All these factors help in delivering high-quality audit.

A number of prior studies results support the hypothesis that Big *N* auditors are associated with a lower incidence of earnings management (Becker *et al.*, 1998; Kim *et al.*, 2003), and more accurate earnings forecasts (Vinten *et al.*, 2005; Lee *et al.*, 2006). In contrast, some studies did not find significant difference between audit firms'

size and reported discretionary accruals (Jeong and Rho, 2004; Maijor and Vanstraelen, 2006).

However, studies conducted in the Belgian context (Vander Bauwhede *et al.*, 2003; Bauwhede and Willekens, 2004) did not support quality differentiation between Big-4 and non-Big-4 auditors. Also, Jeong and Rho (2004) used data from a sample of 2117 firm-year observations from Korean listed firms from 1994 to 1998 to examine whether Big 6 audit firms provide better audit quality than non-Big 6 audit firms. The results show that there is no difference in audit quality between the Big and non-Big audit firms in such economic environments. Jeong and Rho (2004) concluded that Big 6 audit firms do not have enough motivation to provide credible audit quality when litigation risk is low. Thus, It seems that the institutional setting e.g. risk of litigation (Sundgren and Svanström, 2013) influences whether audit quality differentiation exists between large and small audit firms.

In addition, Lawrence *et al.* (2011) tried to tackle the issue by examining whether disparities between audit quality proxies among large and small firms are actually affected by the audited firms' characteristics. They concluded "that Big-4 audit quality is not considerably higher than that of non-Big-4 auditors". Also, Idris (2012) studied earning management in manufacturing firms listed on the Amman Stock Exchange over the period 2005–2008, and he reported that Big-4 audit offices do not have a significant effect in reducing abnormal accruals.

On the other hand, Big *N* audit firms have been criticised as an indication of high-audit quality for different reasons. First, as the litigation risk concern is an important motivation for Big *N* audit firms to deliver high-quality audit; it is not a strong

motivation in Jordan where the litigation risk is low, compared to the Common Law contexts where shareholders benefit from easier lawsuit opportunities. Investors in Jordan do not normally complain against auditors, and there are no common cases that went through court (JACPA, 2015). Consistent with this, Piot and Janin (2007) stated that low litigation risk increases the tolerance of Big *N* audit firms toward opportunistic accounting practice, and “they do not have to handle this litigation threat by adopting a more conservative attitude with respect to earnings management”.

Second, as common in developing countries, Big-4 firms tend to operate through local partnership firms (Siddiqui *et al.*, 2013). In Jordan, Big-4 auditors are local affiliates of Big-4 international firms, except Deloitte. These audit firms may not have the same quality control standards as the Big-4. At the same time, there are local audit firms comply with high audit quality standards, for instance Arab Professional Auditors, Abbasi Co, Abu Ghazaleh, and Ghosheh for auditing (JACPA, 2013).

Third, Big-4 (affiliated) firms in Jordan do not have a substantial market share relative to developed countries¹¹, as only 35% of the listed non-financial companies are audited by the Big-4 affiliates (37% of the sample used in this study is audited by Big-4/affiliates). This indicates that Big-4 firms do not dominate the market or play a substantial role. Simunic (2003) mentioned that Big *N* may not be of higher quality in contexts that are characterised by low litigation risk, and in which the Big *N* are not major players.

¹¹ For instance, more than 97% of the UK FTSE 350 is audited by the Big-4 (Nehme, 2013).

Fourth, using the Big-4 and non-Big-4 dichotomy¹² fails to capture quality variation for a large number of firms as the prior relevant studies suggest a similar level of audit quality exists in each category. In the case of Jordan, how can we differentiate the audit quality provided by non-Big-4 firms to 63% of non-financial firms from that that provided by the Big-4 to 37% of these firms? Consistent with this, Defond and Zhang (2014) pointed out that the major drawback of using Big *N* as a discrete measure is the inability to capture subtle differences in the demand for audit quality. Moreover, Arnett and Danos (1979) argued that as long as professional standards are maintained, it is unfair to arbitrarily differentiate between the large *N* auditors and other auditors.

Fifth, Simunic (2003) revisited the issue of audit quality and its association with large audit firms and he raised many concerns. He mentioned that there is no direct evidence – based on studies of audit production – of quality differences between big firms vs. non-big firms. How do processes of big firm audit differ from those of non-big firms? And at the same time the large corporate failures (e.g. Enron, Worldcom, Arthur Andersen, etc.) have largely involved the big audit firms. Simunic further added “the argument underlying a constant expected audit quality for an audit firm assumes limited information about an audit. Other credible information about a specific audit available to users makes auditor brand name less important e.g. audit fees (where disclosed) might also be a good proxy for audit quality. Also, both Big-4 and non-Big-4 firms significantly reduce their total audit effort when subject to severe time and fee pressure from the client”.

¹² The vast majority of previous studies employed Big-4 and non-Big-4 are dichotomous. Few studies used the number of clients (Choi, Kim, Kim, Zang, 2010) and total fees received by each audit firm (John Daniel Eshleman and Peng Guo, 2014; Choi et al., 2010; Francis and Yu, 2009) as proxies of audit firms' size. For this current study, the researcher tried to obtain this kind of information (number of clients or fees) but they were inaccessible in Jordan.

4.1.2.3. Auditors' industry specialisation

A specialist auditor is defined as a firm that has “differentiated itself from its competitors in terms of market share within a particular industry” (Neal and Riley Jr, 2004: 170). The industry specific knowledge is addressed by the literature as an indication of audit quality based on the rationale that the specialist auditors possess a strong knowledge of a particular client industry which helps them in making appropriate judgments, and is in turn translated to higher audit quality.

The results of prior literature suggest that the auditor's industry specialisation increases audit quality, improving the accuracy of error detection (Solomon *et al.*, 1999; Owahso *et al.*, 2002), decrease the likelihood of earnings management (Basiruddin, 2011), increase disclosure quality (Dunn and Mayhew, 2004) and enhance the quality of auditor's risk assessment and improve audit-planning (Taylor, 2000; Low, 2004).

Furthermore, Balsam *et al.* (2003) and Krishnan (2003) linked auditor industry specialization with a reduction in earnings management. These studies concluded that lower discretionary accruals are found to be lower with clients audited by industry specialists than the clients of non-specialist auditors. This is indicating that industry specialist auditors play a role in reducing earnings management and curbing managers' opportunistic behaviour.

On the other hand, the industry specialisation model suffers from a number of limitations. First, this model is typically measured dichotomously, which implicitly assumes a homogeneous level of audit quality provided within each category. Consequently, though it differentiates quality between audit firms based on their

market share in each particular industry, industry specialisation fails to capture relatively subtle variations in audit quality (Clarkson and Simunic, 1994; DeFond and Zhang, 2014). Second, there is a lack of consensus on auditor industry specialisation's measurement (Neal and Riley, 2004), suggesting that specialisation measures quality of audit service with a relatively large measurement error (Defond and Zhang, 2014). For instance, it is not clear whether the advantages of industry specialisation are coming from auditing a large number of clients or a few large clients (Balsam et al., 2003). Third, an audit firm may have extensive industry experience even when its within-industry market share is small relative to other audit firms (Minutti-Meza, 2013).

Contextually, the Big-4 offices in Jordan are auditing 43 firms out of the study sample 115 firms, with other local audit firms sharing in 72 firms. It was clear while collecting the data manually that no particular audit firm(s) is (are) dominant in a particular industrial (or sub-industrial) category, nor any of them have large market share at a level that helps to make this audit firm industry expertise. Thus, the industry specialisation model seems to be not relevant to a small market like Jordan as it will give unreliable outcomes.

4.1.2.4. Accruals

Accruals are used widely in the literature as a source of earning management. Accruals, or discretionary accruals, in particular, are used as an indication of earning manipulation conducted by managers (Jones, 1991). Total accrual which is the most common measure is calculated "as the change in non-cash working capital before

income tax payable less total depreciation expenses. The change in non-cash working capital before taxes is defined as the change in current assets other than cash and short-term investments less current liabilities other than current maturities of long-term liabilities and income tax payable” (Jones, 1991: 207).

Discretionary accruals are associated with Accounting and Auditing Enforcement Releases (Dechow et al., 1996), and thus capture the increased possibility of more severe misstatements (Defond and Zhang, 2014). Defond and Zhang (2014: 288) reported that the advantage of using accruals proxy “is that their continuous nature captures variations in audit quality even in studies that are restricted to relatively small samples, and within the subset of clients who do not have egregiously poor audit quality. This contrasts with other output measurements, whose infrequent occurrence requires large samples, and whose discrete nature masks any variation in audit quality among clients without restatements and going concern”.

On the other hand, the common disadvantage of this reporting quality measures is that it tends to have high measurement error. For instance, absolute accrual can range from 4% to 10% of total assets, on average, relying on the estimation model and included sample (Gul et al., 2009), that looks too large to be plausibly justified by earnings management alone. Furthermore, there is little consensus on how these proxies should be measured. For example, accruals can be measured using an absolute value, assigned value, the Jones model, the modified Jones model, and/or performance matching (Defond and Zhang, 2014).

In conclusion, input-based proxies (audit fees, audit firms and industry specialisation) are more appropriate when we consider demand-side of audit quality. On the other

words, effective directors for instance are expected to “demand” higher audit quality. Defond and Zhang (2014) further mentioned that the input based proxies (e.g. audit fees) are more appealing because clients must choose audit quality based on observable inputs. This is rationale behind why empirical research examining the effects of demand-side factors employs input based proxies. Output-based proxies, however, “are constrained by firms’ innate characteristics and confounded by the reporting system. Thus, to use these proxies, it is important to control for client innate characteristics and internal controls over financial reporting in isolating the effects of audit quality” (Defond and Zhang, 2014).

Ultimately, Simunic (2003) concluded that the better way to know the effectiveness of audit firms in delivering high quality is to know what incentives are behind this. From their survey’s results obtained from relevant Jordanian participators, Al-Khaddash *et al.* (2013) concluded, in their survey, that Jordanian auditees should provide high fees as an incentive for auditors to enable them to do better work, and to be satisfied and comfortable. They further mentioned that if an auditor who receives high fees delivers poor audit quality; this makes him lose face and feel shame. In conclusion, measuring audit quality is still a controversial task because there are different views as to what constitutes higher-quality audit. Though the Big-4 firms’ model provides an indication about audit quality as reported by prior research, the audit fees model is preferable in a context like Jordan (given the above discussion). Therefore, based on the above discussion, the study follows prior high profile research, and considers the contextual situation by employing audit fees as a superior model to capture audit quality within the Jordanian environment.

Finally, the study's questionnaire survey provided the opportunity to corroborate the use of audit fees as a proxy for audit quality in Jordan compared to the other measures discussed above (as presented in Table 7.4). Most of the respondents (71.3% of the board directors; 78.5% of audit committee members and 73% of auditors) agreed about this proxy in the Jordanian context.

4.1.3. Board of Directors and audit quality

The first research question addresses the impact of internal corporate governance mechanisms on audit quality measured by audit fees. Board of directors and audit committees are the most important corporate governance tools. The following section discusses board of directors and audit quality. Another internal corporate governance pillar; audit committee is discussed in section 4.1.2.3.2.

The board of directors and its quality have received increasing attention by researchers in recent years. The board of directors is essential in the corporate governance process, it is described as a lynchpin (Gillan, 2006), and as a main central mechanism (Daily et al., 2003) for the organizations' governance system. Boards of directors have the ultimate responsibility for the functioning of the firm (Jensen, 1993), as their role includes a broad range of duties, powers, and responsibilities.

As an essential component in corporate structure, boards of directors in Jordan are responsible for “(a) setting strategies, policies, plans and procedures that realize the objectives of the company, serve its interests, and maximize the rights of its shareholders, (b) setting necessary procedures to ensure that all shareholders,

including non-Jordanians, enjoy their full rights and that they are treated in justice and equality without any discrimination, (c) taking necessary measures to ensure compliance with the laws in force, (d) organizing the company's financial, accounting and administrative affairs by means of special internal regulations, ... (g) Setting the company's disclosure and transparency policy, and overseeing its implementation in accordance with the requirements of the regulatory authorities and the laws in force, ... and (j) appointing the company's general manager and terminating his services" (Jordan Corporate Governance Code, 2008: 9).

Therefore, a high quality board effectively achieves its monitoring, controlling, and advisory duties in order to maintain the company's value and protect the shareholders' interests. A number of prior studies presented its fruitful role in different corporate aspects. For instance, the effective board reduces probability of financial statements fraud (Beasley, 1996), reduces the likelihood of earning manipulation (Dechow et al., 1996), strengthens the internal control system (Dechow *et al.*, 1996, Tsui *et al.*, 2001, and Messier, 2000), affects capital structure and increases the financial return (Rechner and Dalton, 1991), reduces opportunistic managerial behaviour and expropriation of firm resources (Byrd and Hickman, 1992; Yatim *et al.*, 2006), decreases cost of debt and increases the reporting integrity (Anderson *et al.*, 2004).

Moreover, given that the agency theory assumes the divergence/conflict in interests between owners (principals) and managers (agents) in the publicly traded companies, and this conflict, in turn, may affect companies' value and owners' wealth; boards of directors play a vital "controlling & monitoring role" in order to mitigate this conflict (Jensen & Meckling, 1976). Also, (Hermalin and Weisbach, 2001) consider board of directors as an important part of the "market solution" to the agency problem by

alignment the interests of all related parties in organizations especially between managers and owners.

One of the important roles of the board is “monitoring of what top management does,..., the monitoring of managerial actions can, in part, be seen as part of a board’s obligation to be vigilant against managerial malfeasance. Yet, being realistic, it is difficult to see a board actually being in a position to detect managerial malfeasance directly; at best, a board would seem dependent on the actions of outside auditors, regulators, and, in some instances, the news media. Indirectly, a board might guard against managerial malfeasance through its choice of auditor, its oversight over reporting requirements, and its control over accounting practices” (Adams et al., 2010: 65).

Therefore, boards of directors are expected to play a significant role in ensuring higher audit quality, as well as monitoring and facilitating the external auditors’ works. The relationship between boards of directors and external auditors is derived mainly from the following: first, given that the boards of directors have an oversight role over auditing and financial reporting processes, the external auditors provide a high quality audit in order to satisfy the boards’ expectations and to maintain a good relationship with their clients (Carcello *et al.*, 2002 and Beasley, 1996). Second, the board of directors asks for high audit quality to maintain shareholders’ interests and to protect their reputations, i.e. approving untruthful financial statements can destroy directors’ reputation (Carcello *et al.*, 2002). Finally, the board of directors (and audit committee) review the audit work and scope, and they have ultimate authority to select, evaluate, and where appropriate, replace the external auditor (Blue Ribbon Committee, 1999).

Boards of directors normally include a mix of executive and non-executive directors. Executive directors are those who work in the organisation as full-time employees, whereas non-executives refer to those who are not employed in the organisation and have no business relation with the organisation (Adams et al., Lipton and Lorsch, 1992; 2010; He and Sommer, 2010).

Each type of director is important for the survival of firms. Independent non-executive directors are decision experts, they are very keen to protect shareholders' interests, they have incentives to effectively monitor the management in order to protect their reputations, and they play an essential role in mitigating the agency problem between management and shareholders (Fama & Jensen, 1983 and Vafeas & Theodorou, (1998). Moreover, "Non-executive directors should scrutinise the performance of management in meeting agreed goals and objectives, and monitor the reporting of performance. They should satisfy themselves on the integrity of financial information and that financial controls and systems of risk management are robust and defensible." (The UK Corporate Governance Code, 2010: 10).

On the other hand, because executive directors are full time employees and they are well-informed, they have more knowledge and technical expertise than outside directors (Beasley, 1996; Muth and Donaldson, 1998), and they act as an information link between external directors and management (Vafeas and Theodorou, 1998). Raheja (2005) mentioned that although the executive directors are an important information source for board of directors, they may weaken the monitoring role and distort firms' objectives due to their private interests and lack of independence. Ultimately, the mix of experts, valuable information, independence and objectivity in

the boards strengthen the corporate governance system and increase the value of the firms (Byrd and Hickman, 1992 and Beasley, 1996).

The Jordan Corporate Governance Code (2008) highlights the importance of the mixture of these types of directors, and recommends that one-third of directors should be independent non-executives. The Jordanian code defines independent director as “a member not tied to the company or any of its upper executive management, affiliate companies, or its external auditors by any financial interests or relationships other than his shareholding in the company that may be suspected to bring that member benefit, whether financial or incorporeal, or that may affect his/ her decisions or lead to exploitation of his/ her position with the company”.

Based on the Code, the board member loses his independence in any of the following cases: “If he is, or has been, employed by the company or any of its affiliates during the last three years preceding his nomination for membership of the board of directors; If he or any of his relatives has direct or indirect interest in the contracts, projects and engagements signed with the company or any of its affiliates to the value of JD 50,000 or more; If the member or any of his relatives is a partner of the company's auditor, or if he is or has been a partner or employee of the company's external auditor during the last three years preceding his nomination for membership of the board; or If the member has a control in the company of more than 10% of the company's capital”.

4.1.2.2.1.1. Board of directors and audit quality: prior empirical evidence

Research done in this area revealed the important role played by the board of directors and examined different board characteristics (board of directors' independence, CEO duality, board size, board ownership, board diligence and board diversity), as a measurable proxy for its effectiveness.

Carcello *et al.* (2002: 381) examined the relationship between three board characteristics (independence, frequency of meetings, and the number of directorships) and audit fees for *Fortune 1000* companies for one year ended in March 1993. By considering the Big 6 clients only, their regression revealed a positive relationship between all board characteristics and audit fees. They have indicated that “more independent, diligent, and expert boards seeking to protect their reputation capital, to avoid legal liability, and to promote shareholder interests by purchasing differentially higher-quality audit services. The auditor's cost of providing such services are incorporated into the audit fee”.

O'Sullivan (1999) examined post-Cadbury, whether corporate governance initiatives impact the statutory audit fee paid by large UK companies, and particularly they were interested whether board and audit committee compositions (board independence, role duality, and audit committee size) affect the audit fees. By examining the largest 146 UK firms at the end of 1995; their results showed evidence of no significant relationship between board composition, audit committee composition, and audit fees.

O'Sullivan (2000) examined the impact of board composition (independence and role duality) and ownership concentration on audit quality in the UK prior to the adoption of the recommendations of the Committee on the Financial Aspects of Corporate Governance (Cadbury, 1992). Using data from a sample of 402 listed firms at the end

of 1992, they found that the proportion of non-executive directors are positively related to audit fee levels, and found no relationship between large blockholders or role duality on audit fees. This outcome suggests that a greater proportion of non-executive representation leads to more extensive audit work which in turn is expected to result in more trustworthy financial statements.

By exploring their role in assuring the quality of earnings, Klein (2002) examined the effect of audit committee and board characteristics on earnings management. Using a sample of 692 publicly traded US firm-years, Klein (2002) findings showed a negative relationship between audit committee independence, board independence and abnormal accruals. She stated that any reductions in board of directors or audit committee independence are accompanied by large increases in abnormal accruals, and overall greater board and audit committee independence are more effective in monitoring the quality of the financial accounting process.

Tsui *et al.* (2001) tested the role of independent directors as an effective monitoring mechanism (measured by audit fees), and further examined whether the role of growth opportunities moderate the relationship between independent directors and audit fees. Using data from a sample of 1038 quoted firms in Hong Kong in the years 1994 to 1996; they found that audit fees are negatively related to board independence. They argue that a situation where the directors are less independent makes them more dominated by executives, and this has an adverse impact on the reliability of the accounting system, which in turn results in higher control risk. A higher control risk, at the same time, will result in intensive audit work and consequently will be translated into higher audit fees. Moreover, they found that the firms' growth opportunities decrease the monitoring effectiveness that is provided by independent

directors, and therefore weaken the adverse correlation between independent boards and audit fees.

Bliss (2011) examined whether audit fees have a positive relationship with board independence and whether CEO duality affects this relationship. Utilising a sample of 950 Australian non-financial firms in 2003, Bliss found a positive correlation between board independence and audit fees as more independent directors demand higher audit quality in order to fulfil their monitoring role. However, he did not find this correlation in firms with CEO duality, which implies that the dominant CEO compromises/decreases the board's independence. This effect of role duality is previously highlighted by the Cadbury report (1992, article 4.6), which stated that a conflict of interest may arise when the CEO plays the chairman role at the same time, which consequently compromises the effectiveness of non-executive directors.

From the Malaysian context, Yatim *et al.* (2006) employed a cross-sectional regression of 736 listed firms for the year ending in 2003. The purpose of their study was to examine the association between board of directors and audit committee characteristics and external audit fees. The study also examined whether Bumiputera-controlled firms pay higher audit fees. The results showed a significant positive relationship between external audit fees and board independence, audit committee expertise, and the frequency of audit committee meetings. Further, the study found a strong negative association between audit fees and Bumiputera-owned firms.

Moreover, the literature also showed empirical evidence regarding the role of boards in different aspects such as financial statement fraud (Beasley, 1996), financial

disclosure quality (Karamanou and Vafeas, 2005), earning management (Salihi, 2015), and financial performance (Haniffa and Hudaib, 2006).

Beasley (1996) examined the relationship between independent board members and financial statement fraud. He used a logit regression analysis of 75 fraud and 75 no-fraud firms from the US and found firms which have boards with significantly higher percentages of independent members have less financial statement fraud than other firms; however, the presence of an audit committee does not have any significant impact on the likelihood of financial statement fraud. Further, the findings from Vafeas (2005), who used data on 252 US firms between 1994 and 2000, revealed that audit committee and board structure are related to financial reporting quality, but the relationship was not strong.

Haniffa et al. (2006) examined 97 Malaysian listed firms over the period 2002 to 2003 to investigate to what extent board of directors and audit committee effectiveness reduces earnings management. Using a cross-sectional modified version of Jones model, where abnormal working capital accruals are used as a proxy for earnings management, the findings showed that earnings management is positively related to the number of board members, which indicates that larger boards appear to be ineffective in their monitoring duties relative to smaller boards. An insignificant relationship between independence of board and audit committee and earnings management was also reported, which also suggests that these mechanisms may not be effective in their monitoring role. The study further found that ethnicity has no effect in mitigating earnings management.

From the Nigerian market, Salihi (2015) studied the effect of board of directors and audit committee size on earnings management. Using multiple linear regressions, a sample of 29 companies in the consumer sector of the Nigerian stock exchange were analysed over the period 2010 to 2013. Inconsistent with Haniffa, Abdul Rahman, and Ali (2006), the findings showed that audit committee size has a significant negative effect on earnings management, and there is no impact of large board size indicating that a larger board of directors is not efficient to reduce the tendency of managing earnings in the Nigerian environment.

To the best of the researcher's knowledge, none of the previous literature has tackled the impact of any corporate governance dimensions on audit quality in the Jordanian context. However, Abed *et al.* (2012) examined the effectiveness of boards of directors' characteristics (including independence, size, and duality) on earning management. By utilizing 81 listed firms in the Amman Stock Exchange (ASE) for the period from 2006 to 2009 and applying cross-sectional modified version of Jones' model, their results generally showed no significant relationship between corporate governance factors. The researchers stated that the corporate governance practices have just started in Jordan, therefore, companies need more time to comply adequately with the new regulations, which in turn may affect the generalizability of the results.

In summary, the evidence from literature generally highlights the role of boards of directors in many corporate aspects and in enhancing audit quality in particular. However, the existing literature revealed inconsistent results about its effectiveness in ensuring high-quality audit. Furthermore, the vast majority of the relevant literature is conducted in UK and US contexts which are institutionally different from other

contexts and from the context of this study in particular. The age of the employed data, sample size, and the single-equation approaches in most of the existing literature represent further limitations of their conclusions. See the table 4.1 at the end of this chapter and literature gap section which clearly differentiate this study from the existing literature.

4.1.2.2.1.2. Board of directors and audit quality: hypotheses development

The Jordan Corporate Governance Code (2008) prescribes a number of characteristics for the structure of board of directors. Most important recommended attributes are addressed by this study. First, JCGC (2008) emphasizes the importance of board of directors and its independence. It recommends that one-third of directors at least should be independent in order to carry out effective monitoring away from management pressure. This is consistent with Cohen et al., (2002) who stated that primary characteristics for board members in the agency perspective are their independency from management.

Second, JCGC (2008) recommends of chair-CEO separation. Having one person that holds both positions of chairman and CEO leads to a conflict of interests, as different tasks are assigned to each position. Jensen (1993) argues that it is crucial to separate the CEO and the chairperson positions for the board to ensure effective monitoring. Third, JCGC does not mandate a specific number of members that the board should include, instead, it offers a wide margin, and recommends that board size should be between three and thirteen. So given the ambiguous rule of board size, the study tends to find the consequences of large board size with regards to audit quality. Fourth, more frequent meetings may indicate a more active board, and may be used as a proxy

for the time directors have to monitor management (Vafeas, 1999). Finally, gender diversity in the board enhances board performance (Adams and Ferreira 2009). So the study expects that gender diversity in the board may contribute to audit quality.

It is worth to mention that the following hypotheses (in addition to the hypotheses related to audit committee in section 4.2.3.2.2. are based on the Jordanian corporate governance code which is the only governance regulation in Jordan. As mentioned in the corporate governance section 2.3.5, this code (JCGC, 2008) mirrors the models in developed countries especially the UK and the US, without consideration given to the socio-cultural peculiarities of the Jordanian business environment. For example, the JCGC recommendations regarding board independence, role duality, board size, frequency of meetings are similar to the recommendation of Cadbury Report (1992), the UK combined Code of Corporate Governance (1998), Higgs Report (2003) in the UK, and also quite similar to section 101 of SOX in the USA. Moreover, the JCGC recommendations regarding audit committees' structure are similar to the recommendations of Cadbury Report (1992), the UK combined Code of Corporate Governance (2003), and section 301 of SOX.

After doing a review of the relevant literature, hypotheses will be proposed based on agency theory in particular, and causal relationships will be established between variables. The available literature makes it more natural to identify hypotheses based on the available literature and theories. Hence, after a careful analysis of the literature, hypotheses will be deduced and translated into operational terms (this applies for hypotheses development of audit committee and ownership structure as well).

In the following sub-sections, this study presents hypotheses development of the aforementioned boards of directors' features.

Board independence

As the important objective of the board of directors is to ensure that management acts towards maximising shareholders wealth, the important characteristic for a board member in the agency perspective is independence from management (Cohen *et al.*, 2002). So independent directors are decision experts (Fama and Jensen, 1983), and do not have a financial interest in the company, nor they do have psychological ties to its management (Abbott *et al.*, 2004; Boo and Sharma, 2008). Consequently, they are in a better position to objectively monitor and protect investors' interests and firms' value.

Fama and Jensen (1983) and Vefas and Theorden (1998) argued that independent directors play an essential role in mitigating the agency problem between management and shareholders. They also take their monitoring role seriously in order to protect shareholders' interests, and to avoid potential litigation losses. Moreover, a number of empirical studies documented the role of independent directors in strengthening the internal control system, reducing financial statement fraud (Beasley 1996), decreasing probability of earning management (Dechow *et al.*, 1996), decreasing probability of financial reporting misstatement (Messier, 2000), and improving audit quality (O'Sullivan, 1999; Zaman *et al.*, 2011).

Furthermore, O'Sullivan (1999) and O Sullivan and Diacon (2002) explained that the external auditor can meet with independent directors away from management influence to discuss any issue regarding audit process. They further pointed out that independent directors focus, in their negotiation with the auditor, on audit scope rather

than on the audit fees in order to protect shareholders' interest. Moreover, independent directors encourage more intensive audit work as a complement to their monitoring role, which thereby mitigates the agency problem.

A number of studies have found a positive relationship between independent directors and the level of audit quality (O'Sullivan, 2000, Carcello *et al.*, 2002, abbot *et al.*, 2003, and Bliss, 2011, Zaman *et al.*, 2011). These studies consider the audit process as a complement function for their monitoring role, and they require higher audit quality to protect their reputation and to avoid legal responsibility.

The Jordanian corporate governance code (JCGC) emphasized the necessity of independent NEDs, and it recommends that at least one-third of the board members should be independent members. Based on the JCGC, the board member loses his independence in any of the following cases: "If he is, or has been, employed by the company or any of its affiliates during the last three years preceding his nomination for membership of the board of directors; If he or any of his relatives has direct or indirect interest in the contracts, projects and engagements signed with the company or any of its affiliates to the value of JD 50,000 or more; If the member or any of his relatives is a partner of the company's auditor, or if he is or has been a partner or employee of the company's external auditor during the last three years preceding his nomination for membership of the board; or If the member has a control in the company of more than 10% of the company's capital".

Hence, based on the literature and agency theory proposition that raised the importance of board independence to control and monitor management and decrease the agency problem; this study proposes the following hypothesis:

H1: There is a significant positive relationship between the proportion of independent directors and audit quality.

Role duality

Role duality means that the board chairman and CEO positions are occupied by the same person. As part of his/her responsibility, chairman hires, removes, and evaluates the CEO, and this creates the need for separating these two positions to ensure effective monitoring (Jensen, 1993). Therefore, it is difficult for the CEO/ chairman to do these functions objectively and away from his/her opportunistic behaviour, thus he/she needs to be controlled by an independent director.

From the agency theory viewpoint, the CEO is responsible for implementing strategic decision (decision management role), whereas the board is responsible for monitoring and ratifying the CEO decisions (decision control role), so this may cause the CEO- without effective monitoring- to act towards maximising his/her own wealth and minimising his/her own risk even at the expense of shareholders (Boyd, 1995). Moreover, as the CEO controls the information given to the board, this prevents the board of directors from effectively monitoring and evaluating the CEO's actions (Jensen, 1993).

So the expected monitoring role of the directors is to curb managers' misbehaviour and to compel them to produce high quality financial statements, as proposed by the agency theory (Jensen and Meckling, 1976). Given this, existence of role duality may hamper ability of the boards of directors to exert effective monitoring, and this

therefore could negatively affect audit quality. Moreover, the relationship between CEO domination and audit quality is based on the notion that CEO role duality is likely to result in a potential conflict situation, i.e. The CEO in such a case is monitoring his own decisions, and this consequently decrease the board's effectiveness to provide oversight over managerial decisions (Vance, 1983 and Tsui et al., 2001). This notion is highlighted by the JCGC (2008) and by the Cadbury report (1992, article 4.6), which stated that a conflict of interest may arise when the CEO plays the chairman role at the same time, which consequently compromises the effectiveness of non-executive directors.

Previous studies (Carcello et al., 2002; Zaman et al., 2011; O'Sullivan, 2000) revealed inconsistent findings regarding the impact of duality on audit quality. Carcello *et al.*, (2002) documented a positive relationship between the existence of role duality and audit fees as a proxy for audit quality. O'Sullivan (2000) reported that there is no relationship, whereas Zaman *et al.*, (2011) showed a negative association.

The JCGC (2008) highlights the importance of separating the CEO and chairman role to enhance board effectiveness, which consequently enhances audit quality. It recommends that it is not allowed for one person to hold the positions of chairman of the board of directors and any executive position simultaneously in the company.

Thus, based on the agency theory's propositions and given the dominant arguments in the literature; this study expects that the existence of role duality impedes board of directors from exerting effective monitoring. This is proposed in the following hypothesis:

H2: There is a significant negative relationship between role duality and audit quality.

Number of meetings

Board meetings, as an indicator for board activity, are necessary for directors to carry out their duties effectively (Lipton and Lorsch, 1992), and to act towards maintaining shareholders' interests (Vafeas, 1999). However, not all board meetings are beneficial. They may just repeat useless routine tasks, and may suffer from inefficient time management for directors' dialogue (Vafeas, 1999).

Since there is a meeting benefit (e.g. monitoring benefit) and there is a meeting-related cost (e.g. meeting fees and preparing cost), Vafeas (1999) suggested that the firms should make a trade-off between costs and benefits of meetings frequency, and should determine the number of meetings efficiently, depending on their circumstances.

The JCGC (2008) recommends that the board of directors should meet at least once every two months, provided that the number of meetings in the fiscal year should not be less than six. The recommendations of the governance code encourage board of directors to be more diligent and effective in monitoring management actions as well as the overall financial system. This is in line with the monitoring approach of the agency theory. More diligent boards hold high numbers of meetings, as they are very keen to obtain high audit quality in order to protect their reputation, to maintain firms' value, (Abbott *et al.*, 2003; Zaman *et al.*, 2011; Rustam *et al.*, 2013).

So, the results of the aforementioned studies and the recommendations of the JCGC suggest that board of directors that meet frequently are likely to be up to date of current auditing issues and more diligent in the discharge of their duties. This, therefore, implies that boards of directors can take proactive actions and positively influence audit quality. Therefore, based on the dominant arguments about the role of frequent board meetings, the hypothesis has been developed as follow:

H3: There is a significant positive relationship between the frequency of board meeting and audit quality.

Board size

Many studies (Jensen, 1993; Linck *et al.*, 2008; Jizi *et al.*, 2013) discussed the importance of board size in organizations. Large board size has an unclear effect; in one view, large board size increases the board expertise and knowledge and leads to more monitoring effectiveness, and in turn it is advantageous as it improves financial performance (Adams and Mehran, 2011), and decreases cost of debt (Anderson *et al.*, 2004).

The opposite view is that large boards tend to be ineffective and more likely to be controlled by management (Jensen, 1993). Moreover, large board size results in less meaningful dialogue between its members, which makes it difficult to express their opinions (Lipton and Lorsh, 1992), less effective in monitoring management (Jizi *et al.*, 2013), more time needed for decision making, and more communications problems (Bliss, 2011).

It is clear from the literature that there is no consensus view on the optimal board size. Raheja (2005) and Linck *et al.*, (2008) noted that the optimal board size depends on contextual factors and on the company's characteristics in particular. Generally, the board size should be sufficient associated to business requirements, it should be easily managed, and not be so large as to be unwieldy (UK Corporate Governance Code, 2010).

The Jordanian corporate governance code is flexible on this issue and it offers a wide range of options by recommending the board size should be between 3 and 13 members. Moreover, there are no previous studies (to the best of the researcher's knowledge) that examined the effect of board size on audit quality. However, the only study that considered this board characteristic (size) was carried out in Australia by Bliss (2011), and reported a positive correlation between board size and level of audit quality.

Therefore, given the above discussion that the role played by large board size is still debatable, in addition to the limited empirical studies; the direction of the effect of the board size on audit quality is not clear. Therefore the study draws the following neutral hypothesis:

H4: There is a significant relationship between board size and audit quality.

Gender diversity

Arab social structures are different from those in Western societies. Miles (2002) reported that social and cultural barriers persist despite the increasing proportion of Jordanian women at work. Miles (2002) reported that family give more career support to males over females, and that females had to give up their jobs to help their family in home chores. Obtaining a job entailed a difficult negotiation process with the family, because of concerns about travel, accommodation, and harassment.

However, opportunities for women in Jordan are increasing as globalization continues. Jordan is ranked the 77th out of 186 countries according to the Human Development Index (HDI) compared to the 86th level in 2003. Jordan has shown improvements in Gender Empowerment Measure (GEM) over the years. The GEM rose from 0.22 in 1995 to 0.297 in 2002. In 2009, Jordan's rank was 96 out of 109 nations. However, more improvements is needed. The 2007 ratio of female to male earnings was 0.19; quite a low figure, since a ratio of 1; would indicate absolute equality. The number of female in government roles increased from 4.6% to 9.9% during the period between 1995 and 2002, showing that more improvement is being made in this area (Jordan Human Development Report, UNDP, 2011). Total female employment participation increased from 28 percent in 2003 to 45 percent in 2013 (World Bank, 2013). Recently, MENA countries (Tunisia and Jordan in particular) are beginning to recognize the necessity of developing female talent up to the board level (Terjesen *et al.*, 2009).

The difference between genders is widely documented in the literature, especially with regards to managerial style, decision making and communication process (Ittonen *et al.*, 2011). The literature has shown considerable evidences for the importance of gender diversity for many aspects in organizations.

The existence of women in boards of directors improves the monitoring process, and leads to a more effective board (Gul *et al.*, 2011, Adams and Ferreira 2009, Nielsen and Huse, 2010, and Terjesen *et al.*, 2009), strengthens corporate governance system and improves disclosure quality (Gul *et al.*, 2011), improve earning quality (Srinidhi *et al.*, 2011), and reduce conflict level (Nielsen and Huse, 2010). Moreover, women are generally considered more risk averse than men, and their decisions tend to be more conservative (Watson and McNaughton, 2007). Also, women more sensitive to losses and they be more risk management advantage over men (Schubert, 2006).

On the other hand, although the gender diversity in board improves the performance, Adams and Ferreira (2009) argued that this is true for firms with weak governance system which need more monitoring process. For firms with strong governance system, gender diversity in the board could negatively affect the firm value; because over monitoring probably leads to counterproductive results. In addition, Nielsen and Huse (2010) indicated that gender diversity is not always beneficial for board effectiveness; it is contingent on the context and the nature of the board's tasks.

Due to the importance of gender diversity in the board, many countries take it into consideration. Some countries have determined a minimum number of directors' seats that should be allocated for females. For example, Sweden has proposed a legal requirement that 25% of board's seats should be allocated to female directors, Norway requires 40% of the board to be female (Gul *et al.*, 2011). Also, in its 2010 edition, the UK Corporate Governance Code recommends for giving due regard to diversity, including gender diversity, when searching for board candidates and making appointments to the board. However, the Jordanian regulations do not regulate gender diversity in the board.

Given that board of directors' characteristics have an impact on audit quality (Abbott et al., 2003; Carcello *et al.*, 2002, Zaman *et al.*, 2011), and that gender diversity presumably affects the functioning of corporate board (Erhardt *et al.*, 2003; Adams and Ferreira, 2009; Gul *et al.*, 2011), it is of interest to test whether female representation on board of directors affects audit quality. Gul *et al.*, (2008) examine this relationship and they concluded that existence of woman director is likely to strengthen the board and encourage it to demand additional audit effort from auditors to protect directors' reputations and to avoid legal responsibility. Given that the Jordanian society is considered conservative, this study expects that the existence of women in the board might make it more conservative and more risk averse, and in turn, will motivate the board to demand more audit quality. This relationship will be tested by the following hypothesis:

H5: There is a positive significant relationship between the proportion of woman in the board and audit quality.

4.1.2.2.2. Audit committee and audit quality

The audit committee is one of the board's committees that are formed to help boards and to carry out specific duties. The role of the audit committee, in particular, is

directly related to overseeing financial reporting and auditing activities (Dobija, 2015). Therefore, given this role of audit committee, it is expected to contribute to improving the quality of audit service and enhance the overall corporate governance system- as discussed below.

Audit committees have assumed more importance since the 1990s, particularly after the enactment of relevant regulations such as Cadbury (1992), Higgs (2003) and Smith (2003) reports in the UK, SOX (2002) in the USA, and Best Practice Guide (1997) in Australia, which were a reaction to corporate failures and scandals. In Jordan, the corporate governance code also assigned many responsibilities to audit committees. All these regulations have emphasised the necessity of audit committee existence and its role in enhancing the financial reporting quality (Turley and Zaman, 2004; Ghafran and O'Sullivan, 2012).

Furthermore, audit committees are essential in strengthening the corporate governance system, and important for increasing financial reporting integrity and reducing audit risk (Turley and Zaman, 2004). To avoid a legal liability and to protect their reputation, audit committees should promote and maintain auditor independency, in addition to effectively monitoring the auditing process by demanding a broader audit scope (Zaman *et al.*, 2011). Also, auditor independence is required in order to ensure audit quality, by mitigating management's pressure on auditors (Firth, 1997).

As a part of their role in corporate governance, audit committees have a dominant role in monitoring and facilitating the external audit function, and thereby improving audit quality. Their role is clearly highlighted by the Jordanian corporate governance code (2008) in various aspects. First, audit committee in Jordan play a role in evaluating

and supervising the internal control procedures to ensure its effectiveness. Lee *et al.* (2004) Turley and Zaman (2004) pointed out that effective internal control helps in preventing reporting failure and management cheating, and in turn helps the external auditing process.

Second, audit committees in Jordan ensure auditor independence and ensure that there is no conflict with management (JCGC, 2008). Prior studies confirmed that the existence of an effective audit committee increases the external auditors' independence, because it frees them from management control, and it provides an effective channel of communication, and resolves any problem that may arise between management and auditors (Cadbury, 1992; Carcello and Neal, 2003; Lee *et al.*, 2004; Turley and Zaman, 2004).

Third, audit committees nominate competent auditors and make recommendations to the board of directors about their appointment (JCGC, 2008). Fourth, audit committees assess the external auditor's plan of work, carry periodic reviews and produce final reports, and therefore make relevant recommendations to the board of directors.

4.1.2.2.2.1. Audit committee and audit quality: prior empirical evidence

The role of audit committees has recently come under considerable scrutiny due to increased concerns about the quality of the corporate financial reporting process caused by recent accounting scandals. Audit committees' independence, financial expertise, size, and frequency of audit committees meetings are well examined in the literature as signals of audit committee effectiveness. The effect of these

characteristics on audit quality is documented in the literature; however, the nature of this effect is not sufficiently clear due to inconsistent empirical evidence. The following section presents relevant empirical studies regarding the effect of audit committee effectiveness on audit quality. Other relevant studies that address the role of audit committee in different corporate aspects are mentioned as well.

Abbott et al., (2003) examined how the effectiveness of audit committees (measured by independence, financial expertise and frequency of meetings as dummy variables), influences audit fees. They utilised data for 492 US Big 5-audited firms between February 5, 2001 and June 30, 2001. Contrary to Carcello *et al.*, (2002), the results of their cross-sectional regression showed a significant positive relationship between audit committee independence and financial expertise, and the log of audit fees. Also, no significant relationship has been reported between the number of audit committee's meetings and audit. Given that they used data from the same context, Abbott *et al.*, (2003) argue that the incongruence of their results and Carcello's *et al.*, (2002) results may be due to changes in the regulations in the late 1990s, and the differences in the degree of variation in audit committee characteristics in the samples used.

Furthermore, Lee and Mande, (2005) tested to what extent effective audit committees affect fees paid to external auditors. Their sample included 792 US firms that were audited by Big 5 only for the year 2000. So, their result confirms the result obtained by Abbott et al., (2003). These findings are consistent with the notion that audit committee effectiveness impact the demand for greater audit coverage to assure higher audit quality.

Vafeas and Waagelein (2007) investigated a sample comprising the 2001 *Fortune* 500 firms spanning 2001–2003. They reported that board's independence, size, and meetings, in addition to audit committee's independence, experience, and size, all are positively associated with audit fees. Notably, the results are not consistent across sample years, suggesting that the results coming from examining a single year of data may be misleading (Vafeas and Waagelein, 2007).

Rustam *et al.* (2013) studied the impact of audit committee effectiveness and CEO compensation incentives on corporate audit fees. Using panel data regression for 50 Pakistani firms, their findings indicate that audit committee activity and committee member's independence are positively associated with audit fee levels, consistent with the argument that external auditors work complements audit committees in monitoring management and assuring higher audit quality. This result is consistent with Vafeas & Waagelein (2007). In contrast, CEO's pays incentives neither complement nor substitute for audit effort in disciplining company management. However, they confessed that their sample size is very small; it is only 50 out of more than 700 quoted firms in Pakistan. This raises a concern about precision and generalizability of their findings.

Using a sample of 87 listed firms in New Zealand at the end of 2001, Rainsbury *et al.* (2009) examined the impact of audit committee quality (measured by audit committee independence and expertise) on financial reporting quality (measured by accounting quality scores derived from different accounting choices), and on audit quality (measured by audit fees). The result showed that there is no relationship between audit committee quality and the quality of financial reporting. Similarly, the impact of audit committee quality on audit quality was insignificant. These results are

inconsistence with previous literature which shows that audit committee independence increases audit quality (Abbott *et al.*, 2003 and Lee and Mande, 2005) and decreases earnings management (Jenkins, 2003). Rainsbury et al., (2009) stated that the benefits of audit committees may be less than what have the NZD regulators anticipated, and they assumed that making the audit committee recommendations compulsory may create more effective audit committees.

In order to test whether audit committees are effective in ensuring audit quality by protecting auditors from fee cuts (ensuring the audit hours are not reduced) which might affect audit quality, Collier and Gregory (1996) used a regression model for audit fees using a sample of FTSE 500 at the end of 1991. The findings show that the correlation between audit fees and the presence of an audit committee are positive and significant. The findings suggest that audit committees, to a large extent, protect audit quality from being compromised. However, Collier and Gregory (1996) addressed the merely existence of audit committee, not their effectiveness which might have produced invalids results and hence merits further investigation.

Based on the notion that higher audit fees imply increased audit testing and higher audit quality, Goodwin-Stewart and Kent (2006) tested the relationship between audit committees existence, audit committees effectiveness and the use of internal audit on audit fees. By using a sample of 401 Australian firms for the year 2000, they found that higher audit fees are related to the existence of an audit committee, more frequent committee meetings and increased use of internal audits. Further, no relationship was found between audit committee expertise and audit fees.

Given the importance of financial experience in audit committees, Krishnan and Visvanthan (2009) tested a sample of S&P 500 for the years 2000 – 2002 in order to find out whether the level of audit fees reflects the effectiveness of the audit committees by focusing on financial accounting expertise as a key determinant of the audit committee's effectiveness. Their results showed that audit pricing is negatively correlated with accounting financial expertise. However, this result is valid only where a strong corporate governance structure exists as they did not find a significant correlation between audit fees and accounting financial expertise for observations with weak governance structure.

Zaman, Hudaib and Haniffa (2011) focused on the impact of audit committee effectiveness on audit fees (they studied the joint effect of independence, financial expertise, frequency of meetings and size of the audit committee as indications of effectiveness). By exploring a sample of 135 UK listed companies (out of the total population which is 257 companies) over the years 2001-2004, and using pooled OLS regression, they found a significant positive association between audit committee effectiveness and audit fees. Their results imply that firms with high-quality audit committees are more likely to effectively monitor external auditors, consequently the scope of the audit will increase resulting in higher audit fees.

The literature also shows inconsistent results about the role of the audit committee in constraining earnings management. Lin *et al.* (2006) studied the role of audit committees in ensuring the quality of corporate financial reporting quality by decreasing the probability of earnings restatement. A multivariate logistic regression model was used to test 212 US public firms at the end of the year 2000. Their findings show a negative association between the size of audit committees and the occurrence

of earnings restatement. However, as they reported, other audit committee characteristics have not any significant impact on the reported earnings quality. This result is contrary to Abbott *et al.* (2004) study; that found a significant negative relationship between audit committee's independence, expertise and frequency of meetings and occurrence of a restatement. Garven (2009), on the other hand, reported significant evidence that firms whose audit committee members are independent are more likely to engage in earnings management.

Sun *et al.* (2014) measured real earnings management as abnormal cash flows from operations, abnormal discretionary expenses, or abnormal production costs, and examined the impact of audit committee characteristics on these earning management proxies. They reported insignificant relationships between all audit committee characteristics and earning management.

Hamdan *et al.* (2012) studied the role of audit committee activity in constraining earnings management and improving accounting conservatism in Jordan. The study measures accounting conservatism using the book-to-market approach, and the ratio of total accruals to gross profit. By using a sample of 50 Jordanian industrial firms from Amman Stock Exchange (ASE) during the period of 2004-2009, and employing a pooled data regression, they found no relation between audit committee characteristics and accounting conservatism, with an exception of financial experience which was found to have a positive relationship with accounting conservatism.

Similar to what the study concluded about the empirical literature of board of directors, the role of audit committees in audit quality has been well highlighted by the prior literature. However, the existing literature fails to provide clear and

consistent findings of the impact of audit committee effectiveness in delivering high-quality audit. Therefore, the relevant literature has limitations in the employed sample, methodology, relevant variables, or proxies. The conclusion of this chapter and Table 4.1 show clearly how this study differs from the existing literature.

4.1.2.2.2. Audit committee and audit quality: hypotheses development

The Jordanian Corporate Governance Code (2008) prescribes number of characteristics that effective audit committees should possess. First, the JCGC (2008) extends the notion of director independence to emphasise that audit committees should also be independent (at least two-third of committees' members). The rationale behind this is that an independent member is likely to be free from management's influence, and ensure that high-quality audit is employed and correct financial statements are presented to shareholders.

Second, audit committees members should possess relevant financial experience. Financial expertise helps committee members to understand and interpret financial information correctly, as well as help them to effectively monitor external auditors. The JCGC (2008) recommends that audit committees should be composed of three members; one of them at least should have financial expertise. Third, JCGC (2008) mentioned that larger committees are expected to offer stronger monitoring, and therefore it recommends that the size should not be less than three members.

Fourth, consistent with the notion that the audit committees which meet more frequently allow directors more time to achieve their monitoring duties effectively (Karamanou & Vafeas, 2005); JCGC (2008) recommends that audit committees

should meet at least four times a year. In conclusion, this study expects (as stated in the following hypotheses) that more independent, expert, larger, and diligent audit committees provide better monitoring over management, and productive coordination with external auditors.

Independence of audit committee members

From the agency theory view, independent members in audit committees increase the committees' ability to effectively carry out their oversight tasks over financial reporting and monitor management behaviour, which in turn reduce agency conflict (Fama and Jensen, 1983). Abbott *et al.*, (2000) and Farber (2005) concluded that audit committee with independent members reduce the probability of fraudulent financial reporting and increase the quality of financial statements.

The literature shows inconsistent findings of the role of audit committees. Carcello *et al.*, (2002), Krishnan and Visvanathan (2009) and Rainsbury *et al.*, (2009) found insignificant relationship between the independence of audit committees and audit quality. Abbott *et al.* (2003) in contrast, reported that high audit quality is positively related to audit committees independency. Abbott *et al.*, (2003: 21) argued that “an independent audit committee may demand expanded audit scope in order to avoid being associated with a financial misstatement and preserve reputational capital. The committee may also demand additional audit procedures beyond the initial audit plan for areas that subsequently reveal greater amounts of contention, uncertainty, or risk”. This indicates that independent audit committee members are likely to positively

contribute to audit committee effectiveness, and demand more audit effort to assure financial statement integrity.

Moreover, Lee and Mande (2005), Vafeas and Waagelein (2007) and Zaman *et al.*, (2011) have supported the previous finding. They reported that the effective audit committees (member independent as one of audit committees' effectiveness proxies), have more power over management and are regarded as a complement for the external audit task by carrying out its monitoring role effectively.

Therefore, independent committee members are most likely to demand more audit effort, because they are more interested in reporting the true financial position to the shareholders. Also, independent members are more concerned about their reputational loss (Abbott et al., 2003) which may arise from issuing misleading financial statements. So, based on the dominant argument in the literature and agency theory suggestions, this study states the following hypothesis within the Jordanian context, where audit committee should contain three members, and at least two of them should be independent non-executives:

H6: The proportion of independent audit committee members is positively related to audit quality.

Financial expertise for audit committee members

The importance of the existence of a financial expert member within audit committees is highlighted by Jordan Corporate Governance Code (2008) which emphasises that “... at least one audit committees’ member should have worked previously in accounting or finance fields, or that member should have an academic or professional certificate in accounting, finance or related fields”. Audit committees with more financial experience are better in understanding and appreciating the external audit work, supporting external auditor and solving the disputes which may arise between auditor and management (DeZoort and Salterio, 2001). Under agency theory assumption, high-quality financial accounting process (which increased with financial expertise audit committees) reduces the agency problem by increasing the investors’ ability to take well-informed decisions (Xie *et al.*, 2003).

In addition, audit committee member with financial expertise increase financial statements’ integrity and reduce the probability of fraud, and then has a role in increasing audit quality. Farber (2005) found that less financial expertise is associated with higher fraud and less credible financial reporting system.

Defond *et al.*, (2005) explored the stock market reaction to the appointment of financial experts to the audit committees (this is measured by Three-Day [−1 to +1] Cumulative Abnormal Returns (CARs) surrounding announcements of new director appointments to the audit committee). They studied 702 announcements about appointed directors to audit committees selected from the Corporate Library database from 1993 to 2002 in the US. The result showed that the market react positively to accounting financial expertise appointment (this result is conditioned by strong corporate governance existence before the appointment process), and no significant reaction for non-accounting financial expertise appointment in the audit committee.

This result supports the contention that accounting financial expertise improves and strengthens corporate governance, especially by making audit committees effective in carrying out their tasks with respect to the monitoring process and ensuring financial reporting quality.

In similar manner, Abbott *et al.*, (2003) found a positive relationship between financial expertise in audit committee and audit fees, as a member with financial expertise is more likely to be concerned about audit quality and then demand more audit effort to protect shareholders' interests. Thus, based on the dominant argument and agency theory propositions, the study develops the following hypothesis:

H7: There is a positive significant relationship between the audit committee expertise and audit quality.

Audit committee meetings

Frequency of audit committee meetings provides an indication of audit committee effectiveness (Zaman *et al.*, 2011). This, in turn, implies that more diligent audit committee plays a better oversight role over whole audit process and, therefore, improves audit quality (Zaman *et al.*, 2011), and decreases probability of fraud (Dezoort and Salterio, 2001). Thus, when the audit committee is interested in improving audit quality and decreasing fraud or misstatement, it would demand a broader audit scope and greater effort. I.E. a diligent audit committee, and then high audit quality, curb management misbehaviour (e.g. issuing fraudulent financial statements) and therefore decrease the agency problem.

Prior studies provide inconsistent results regarding the importance of frequency of meetings in audit quality. Lee and Mande (2005), Goodwin-Stewart and Kent (2006) Zaman *et al.*, (2011) revealed that regular meetings lead to effective and well-informed committee which are more diligent in discharging their duties, and consequently results in a positive relationship between meetings and audit quality. Moreover, Inaam *et al.* (2012) examined the association between the number of committee meetings and earning quality in Tunis, and they found more frequent meetings are related to less earnings management. On the other hand, Carcello et al., (2002) and Abbott et al., (2003) stated that the relationship between the number of audit committee meetings and level of audit quality is not significant.

To test this relationship in a Jordanian context where the corporate governance code recommends that the frequency of audit committee meetings should be four times at least, and based on effective monitoring views drawn from prior studies; the study draws the following hypothesis:

H₈: There is a positive significant relationship between the frequency of audit committee meeting and audit quality.

Audit committee size

Most of corporate governance regulations around the world emphasize audit committee size. In Jordan, the Corporate Governance Code (2008) anticipates that large audit committee's size advantageous for monitoring purposes. It recommends

that audit committee should be comprised of at least three directors; two of them should be independent non executives.

Relevant prior studies show mixed findings. Audit committee size is likely to “have an ambiguous effect on the committee’s monitoring performance. Larger audit committees have a wider knowledge base on which to draw but are likely to suffer from process losses and diffusion of responsibility” (Karamanou and Vafeas, 2005:458). However, Zaman et al., (2011) found that audit quality measured by audit fees is positively related with audit committee size. They stated that large audit committees are favourable in firms as they more likely to improve the internal controls quality, as well as they make the audit committee more effective in fulfilling its monitoring role.

Moreover, Yang and Krishnan (2005) examined the relationship between audit committee size and earnings-management in 896 US firms in the years of 1996 to 2000. They concluded that large audit committee size leads to effective monitoring over financial reporting process, which is therefore related to less earnings-management and more audit quality.

Consequently, given above evidence from the prior studies and from the code recommendation, more audit committee members are expected to positively affect audit quality. This leads to the following hypothesis:

H9: There is a positive significant relationship between the audit committee size and audit quality.

4.1.4: ownership structure and audit quality

The second research question targets the ownership concentration in Jordan and its impact on audit quality. In particular, the study focuses on the common ownership identities in Jordan which are; family ownership, institution ownership (financial and non-financial institutions), foreign ownership (Arab and non-Arab investors), and government ownership.

4.1.4.1. Ownership structure and audit quality: overview and theoretical background

Corporate ownership varies and takes different structures across countries (Shleifer, and Vishny, 1997). For instance, largely held shares is typical in US and UK; bank and financial institutions ownership are dominant in Japan and Germany; closely held shares or family ownership in particular are common in most EU countries, East-Asia and the Middle East and North Africa region. The difference in laws and legal families is one of the reasons that firms are owned differently across the countries (La Porta et al., 1999). Civil law compared with common law provides weaker legal protection for investors (Shleifer and Vishny, 1997; Porta *et al.*, 1999). As civil law itself contains three legal families which are German, Scandinavian, and French civil law; the latter is the weakest one in terms of shareholders' protection (La Porta et al., 1999), and is the one which is applied in almost all developing countries in MENA region (including Jordan).

Therefore, how do firms operate in countries characterized by weak law dealing with this problem? And are there any other substitute corporate governance mechanisms?

La Porta et al. (1999) examined this question. They have concluded that companies need to adapt to this context where there is neither enough legal protection nor appropriate law enforcement. So, ownership concentration is one of the efficient ways by which shareholders can protect their rights and effectively control management misbehaviour (Jensen and Meckling, 1976; Shleifer and Vishny, 1997, 1986; Dharwadkar et al., 2000).

Given that legal protection (as an external corporate governance mechanism) for shareholders is relatively poor in developing countries (particularly where a French civil law is applied), the concentration of ownership is clearly dominant as an effective internal corporate governance mechanism in order to protect investors' interests (Shleifer and Vishny, 1997; La Porta 1999). Thus, Shleifer and Vishny, (1997), stated that a large ownership stake is an effective corporate governance mechanism applied to limit management expropriation in poor law contexts (investors prefer to hold more capital to exercise their control rights and consequently avoid the expropriation by management).

However, even in well-developed countries like the US, UK, European countries or Japan, the legal protection and its enforcement alone are not enough to protect shareholders' wealth as the managers there still have a large degree of discretion which consequently makes concentrated ownership an option in the developed countries as well (Shleifer and Vishny, 1997). It is concluded from literature that the concentration of ownership is prevalent across the borders in different degrees¹³. This

¹³ In their study about the corporate ownership structure of 27 wealthy countries, La Porta et al. (1999) revealed that 30% from their sample are owned by family, 18% are government ownership, while only 36% are widely held.

also makes Berle and Means model of ownership (widely held ownership) exceptional rather than the norm as La Porta et al. (1999) concluded in their empirical study.

The classical agency theory deals with shareholders-managers' conflict assuming a divergence between the needs of these two parties. As a suggested solution for this conflict (according to agency theory propositions), concentrated ownership plays an important alignment role in mitigating this agency problem because large shareholders have sufficient incentive and power to control management (Shleifer and Vishny, 1997). However, this structure of ownership creates a new agency perspective which is the principal-principal model of corporate governance and its conflicts are between two groups of principals, majority (controlling) and minority shareholders (Dharwadkar *et al.*, 2000).

The main problem that stems from principal-principal conflict is expropriation of minority shareholders' value (Shleifer and Vishny, 1997). In this structure of ownership, major decision rights remain in the hands of a few individuals and there is usually not enough separation of duties and weak monitoring activities which in turn restrains the abuse of power by the controlling owners. Consequently, minority shareholders' (and other stakeholders') concerns about management and/or controlling shareholders expropriation increase; and therefore increase the need for high audit quality as a tool to mitigate these concerns (Fan and Wong, 2005).

Agency theory suggests that high-quality financial reporting mitigates the information asymmetry level, improves investors' confidence and improves stock price (Khurana and Raman, 2004; Jensen and Meckling, 1976). In addition, Fan and Wong (2005) stated that in a concentration ownership context where there is a potential conflict

between controlling and minority shareholders; the firm is more likely to demand a high-quality audit as a bonding and monitoring mechanism to reduce agency problems. Thus, high audit quality in such environment is required to mitigate agency conflict by reducing information asymmetry and to align shareholders' interests.

Moreover, controlling owners may demand external audit to enable them to accurately evaluate and monitor their investment (Hay et al., 2008), to ensure that the interests of minority shareholders are sufficiently protected (Fan and Wong, 2005; Yang and Krishnan, 2005), to maintain their reputation and promote trust in other stakeholders (Niskanen *et al.*, 2010).

4.1.4.2. Empirical evidence and hypothesis development: identity of shareholders, and audit quality

Ownership concentration is largely addressed in literature as a corporate governance mechanism (Shleifer and Vishny, 1997; La Porta *et al.*, 2000; Akbar, 2015). However, empirical results have not yet showed consistent findings regarding the monitoring effect of blockholders, and whether their presence leads to a credible audit function. Continuing to the above discussion about the role of concentration ownership, large capital providers have a significant role in monitoring and controlling managers' decisions (if they are not already acting as managers) due to their ownership magnitude/voting power, and because they are better informed than the individual investors, and due to the analytical and information processing resources at their disposal (Jensen, 1993; Mitra and Cready, 2005; Khan *et al.*, 2011). This leads to less information asymmetry, and then less agency conflict.

In addition to controlling management, large shareholders play an essential role in appointing external auditors due to their voting power. Therefore, large shareholders may demand high-quality audit for different reasons. Hay *et al.*, (2008) stated that the existence of large shareholders leads to demand for additional audit quality to monitor their investments and to protect their reputation. Also, blockholders might require additional and reliable information regarding firms' performance, and therefore they might expect the auditors to compensate for a lack of control over other internal activities (Hay *et al.*, 2008), to ensure the quality of information they provide (Hadani *et al.*, 2011), and to assure minority owners in particular and other stakeholders that their interests are sufficiently protected (Fan and Wong, 2005; Piot, 2001). This in turn highlights the role of high quality audit to protect firms' assets and owners' reputations, and to align majority-minority interests.

From eight East Asian countries which are characterized by ownership concentration, Fan and Wong (2005) examined whether external auditing plays an effective role in such contexts as a corporate governance mechanism. They found that high ownership concentration is associated with demanding more credible audit. They explained that the reason behind this result is that the large shareholders are keen to employ high quality monitoring and bonding mechanisms to assure other shareholders that their interests are protected. Furthermore, Fan and Wong (2005) found that the firms that frequently issue equity capital are hiring high-quality auditors. This result is in line with the argument that says the controlling owners ask for high-quality audit in order to enhance the confidence of investors.

In contrast, due to their power, large shareholders may act on their interests excessively and then adversely affect other shareholders' interests and a firm's value

(Cheng and Warfield, 2005; Gotti *et al.*, 2012; Ali and Lesage, 2013). Given the demand for audit quality depends on the agency conflict level; higher audit quality is expected in this case to protect minority interests as suggested by agency theory. However, in practise, if those large shareholders behave deliberately to obtain private benefits at the expense of other shareholders, they will be less interested in high-quality audit. Given that high-quality audit is an effective mechanism to reduce the agency problem by protecting minority owners from being expropriated by dominant shareholders, there is a serious concern about this role in the case when external auditors are appointed by shareholders.

Piot (2001) stated that given the hiring of external auditors depends on votes of majority shareholders, minority interests are most likely neglected. This implies that the presence of dominant owners is not always associated with demanding high-quality audit. Instead, dominant owners may appoint low-quality auditors to evade monitoring. This is particularly when those owners control the firms and the managers due to their influential shares and, at the same time, they tend to behave adversely to obtain private benefits, and wishes to surround their behaviour by opacity (Fan and Wong, 2005).

Given that the different types of shareholders have different investment policies and then different degrees of incentives and abilities to exert effective monitoring (Lim *et al.*, 2014), it is expected that these different ownership types will demand a different degree of audit quality to protect firms and minority owners' wealth. Thus, it is worth studying the effect of ownership identity on audit quality in a context like Jordan where there are different ownership groups. Aguilera and Jackson (2003) and Lim, How and Verhoevene (2014) highly recommend taking different types of owners into

consideration when studying ownership structure as they have different targets and strategies.

In the case of Jordan, as in other emerging economies, the legal system does not offer sufficient protection for investors, which therefore makes ownership concentration typical of most listed firms. The results of the World Bank survey (ROSC, 2005) revealed that ownership in Jordan appears to be less highly concentrated than in many emerging markets; average free float (as measured by the ASE) is about 40%. Family ownership is typical. In more recent studies, Zeitun and Tian (2007), Omran et al. (2008) and Jafar and Elshawwa (2009) documented that the ownership in Jordan is concentrated in hand of family and institutions in particular. Also, foreign ownership is common and the government still has ownership in some firms.

Shareholders in Jordan typically are categorized into four main types: families, foreigners, government and institutions (banks and other institutions). The government ownership decreased after the privatization process, but is still available in a number of important companies like Jordanian Airlines, Potash, Phosphate, and the Alrai newspaper. Unlike many developed countries (The US and UK in particular), large institutional investors such as pension funds, trust funds, venture capitalists, and hedge funds) are not significant as controlling shareholders in Jordan (rather, the institutional investors are banks and other small institutions).

Therefore, the focus on concentration ownership in general without considering each type of the owners separately may lead to an incorrect inferences regarding the role played by the different owners (Niemi, 2005). Thus, this motivates this study to go further and test whether the demand of audit quality varies across different ownership

identities (family, government, financial institutions, non-financial institutions, and foreign owners).

4.1.4.2.1. Family ownership

This type of ownership is a salient feature of Jordanian companies (Zeitun and Tian, 2007; Omran *et al.*, 2008; Jaafar and El-Shawa, 2009). The corporate ownership in Jordan is concentrated in the hands of a few individuals particularly who are family shareholders (Zeitun and Tian, 2007), and prevalent in different business sectors (ROSC, 2005).

There are different and inconsistent arguments associated with the role played by family members in the firms as controlling shareholders. The previous studies (Lim, How and Verhoeven, 2014; Azoury and Bouri, 2015; Niskanen *et al.*, 2010; Anderson and Reeb, 2003) have failed to agree on the role of family owners in increasing or decreasing agency costs. From one side, high family ownership increases the likelihood of abusing their power and thus expropriates non-family minority shareholders. Moreover, in family ownership firms, executives' positions are often occupied by families' members, and they are more likely to pursue private benefit of control and expropriate other shareholders' interests. This suggests that the type II agency cost (principal-principal model) is dominant in family firms (Azoury and Bouri, 2015). This requires high-quality audit to mitigate this agency cost by helping to limit managers' mischief and protecting interests of other shareholders.

Also, Niskanen *et al.*, (2010) stated that in high family ownership firms there is a concern that the management acts for the controlling family and disregards other

owners. This has an entrenchment effect and implies that agency costs are higher in family firms. Agency theory further predicts that the demand for a credible audit services increases when agency problems are higher.

On the other hand, the literature suggests that agency conflict is lower with family shareholders as they are more interested in maintaining long-term firms' value as well as their reputation and consequently less likely to behave adversely (alignment role). The alignment argument of family ownership is based on the notion that there is no harmful conflict between controlling family owners and other owners, and that their interests are aligned, and then the expropriation concern is decreased.

From 476 small and private Finnish firms, Niskanen *et al.*, (2010: 230) presented empirical evidence of how family ownership affects the demand for audit quality. Their conclusion indicates that family ownership increases firms' incentives to increase the credibility of their financial statements vis-à-vis outside stakeholders.

Wang (2006) examined the relationship between family ownership and earnings quality using data from the Standard and Poor's 500 companies. He presented empirical evidence to show that, on average, the magnitude of family ownership is associated with higher earnings quality. In particular, they found a consistent finding that family ownership is correlated with lower abnormal accruals, greater earnings informativeness, and less persistence of transitory loss components in earnings.

In addition, given that the family firms have reputational concern (Anderson and Reeb, 2003), the family members have greater incentives to protect their reputation by protecting firms' wealth (Lim, How and Verhoeven, 2014). This might be particularly relevant for Jordan where a firms' name in many cases is related to the family's name,

which in turn creates an implicit commitment among family members toward maintaining the family name by stopping them from abusing their power and obtaining private benefits at the expense of other shareholders. Thus, the study expects that family ownership in Jordan is expected to be associated with higher audit quality either to maintain the reputation and/or to limit family owners from abusing the power and protecting interests of other shareholders as suggested by principal-principal theory. Therefore the study develops the following hypothesis:

H10: There is significant positive relationship between family ownership and audit quality.

4.1.4.2.2. Foreign ownership

Foreign investment is predominantly available in the Jordanian market; more than half of market capitalization is owned by foreign investors (ASE, 2015). Jordanian regulations offer investment promotion benefits for non-Jordanians to participate and invest in Jordan. Investment Promotion Law (1995) offer incentives for non-Jordanian investors in terms of freedom from customs duties, tax holidays, income tax exemptions and unrestricted transfer of capital and profits. Moreover, market stability, and lack of taxes on capital gains and dividends attract foreign investors towards investment in the Amman Stock Exchange ASE (Al-Qudsi *et al.*, 2007).

The foreign ownership concentration in ASE has increased drastically in last few decades. The privatization process that started in the 1990s played an important role in shaping and adjusting ownership structures because it aimed to attract more Arab and non-Arab foreign investments by opening up the markets and abolishing state monopoly (ASE, 2013 and Zeitun, 2009). Thus, opening the local market for foreign

investors should be associated with good corporate governance system and high level of transparency, which in turn creates the need for high-quality audit.

In addition to the privatization process, other variables played an important role in increasing foreign investment in Jordan, for instance, investors' confidence in the economy (Al-Halalmeh and Sayah, 2010), enacting Investment Promotion Law (Ali Khrawish and Zakaria Siam, 2010); regional events (Mansur, 2008), ASE's stability and regional economic growth (Al-Qudsi *et al.*, 2007).

Based on published figure from ASE and SDC, the ratio of foreign ownership (measured by market capitalization) increased from 38% in 2003 to 51.3% in 2012. The foreign ownership in ASE is concentrated in banks (58%) and industry (57%), and less concentrated in the service sector (35%). The Saudi investments at the ASE ranked first among non-Jordanian investments; these Saudi investments reached about JD1.3 billion by the end of 2014.

The relevant literature stated that foreign investors require more reliable and transparent information to avoid expropriation by insiders (Ben-Nasr *et al.*, 2015). Being that foreign investors are geographically away from the firms they invest in, this increases information asymmetries and makes managerial monitoring more difficult (Lim, How, Verhoeven 2014). The literature documented that foreigners with substantial ownership exert more pressure on management to improve corporate governance and increase corporate transparency in particular, which therefore reduces information asymmetries (Jiang and Kim, 2004). However, if the foreign owners do not have influential shares (votes), the management may expropriate their interests

and may be less willing to demand high-quality audit in order to hide their unfavourable behaviour.

Niemi (2005) examined the effect of foreign-owned subsidiaries and state ownership on audit quality. He used a sample of 200 non-financial companies in the Finnish context for 1996. The sample was limited to the firms that are audited by the Big Six only due to data accessibility. The findings showed that audit fees (as a proxy for audit quality) are higher in foreign-owned subsidiaries than locally-owned ones, suggesting that higher audit quality is related to foreign investors. Also, Niemi found no relationship between state ownership and audit fees.

There is a scarcity of empirical evidences regarding the role of foreign owners in audit quality. Due to that, the study shows some evidences about their role in other relevant fields, which helps in drawing the relevant hypothesis. Ben Nasr et al., (2015) investigated the impact of state and foreign ownership on earnings quality in 350 newly privatized firms from 45 countries. They documented a positive relationship between foreign shareholders and earnings quality (foreign ownership related to smaller abnormal accruals, higher earnings informativeness) and more persistent earnings. This result supports the argument that expects that foreign owners require higher earnings quality to curb management expropriation.

Using a cross section of 3189 firms from 40 markets in 2002, He *et al.* (2013) showed evidence that companies with a higher foreign ownership tend to have more informative stock prices (measured by the probability of informed trading and price non-synchronicity). Their results indicate that foreign owners contribute to the informativeness of stock prices.

Furthermore, Jiang and Kim (2004) examined whether the level of foreign ownership decreases information asymmetry between firm managers and outside shareholders in Japan. They used a large sample over an 18-year period from 1976 to 1994 and employed different time-series and cross-sectional models to test the magnitude of intertemporal return-earnings associations as an indication for information asymmetry. The results reported that information asymmetry is inversely related to the foreign ownership level.

Al-Najjar (2015) examined the effect of foreign owners on financial performance in Jordanian tourism firms (return on assets and return on equity used as proxies). By using a sample of 15 listed Jordanian firms and employing panel data model, his findings showed no relationship between foreign ownership and financial performance. He stated that the result suggests that foreign investors have no effective role in enhancing financial performance.

In Jordan, Arab and non-Arab foreign investment are common, taking advantage of the aforementioned Jordanian market incentives. Although this investment environment treats all investors (Arab and non-Arab) equally, the study has the incentive to further examine the Arab and non-Arab investors separately. The reason behind this is that the agency problem facing non-Arab investors is expected to be greater than Arab investors for different reasons.

The first reason is the physical distance between the foreigners and the Jordanian market. Investors who are geographically close to investee firms have an information advantage over other investors, possibly because the access to value-relevant information is relatively more convenient (Baik *et al.*, 2010; Kang and Kim, 2010).

Kang and Kim (2010) find that the information asymmetry that arises from geographic proximity is an important determinant of investment decisions, as by these information advantage investors who are geographically proximate to investee targets enhances monitoring capabilities, and thus incentives to monitor their investment.

Second, the language barrier is an important source of information asymmetry because this barrier negatively affects the communication process (Kang and Kim, 2010). The third factor that increases information asymmetry is cultural differences (Kogut and Singh, 1988; Roth and O'Donnell, 1996; Krug and Nigh, 1998). Roth and O'Donnell (1996) argued that, as the cultural gap increases, it becomes more difficult and expensive for foreign investors to access information about investee firms.

Therefore, the cultural and language similarity between Jordan and all other Arab countries helps Arab investors to use informal socio-cultural networks, and thus to be less sensitive to contextual considerations (e.g. local regulations) than non-Arab investors (Sekkat, 2014). On the other hand, foreign shareholders from countries with strong shareholder rights are more likely to be interested in strong governance mechanisms than those from countries with weak shareholder rights (Kang and Kim, 2010).

In summary, as reducing information asymmetry should be an essential target by management to attract more foreign capital (Jiang and Kim, 2004), demanding high-quality audit is expected to pass on a positive signal about management integrity. Also, in order to protect their investment, foreign investors may ask for higher audit quality to decrease information asymmetry and to obtain reliable financial reporting. Furthermore, given that Arab investors are geographically close to Jordan, share the

same language and culture, and take advantage of social networks, the study predicts that non-Arab investors have more agency problem than Arab investors, and consequently high-quality audit is required either by those non-Arab investors to assure their investment or by firms' management to attract this type of investors (due to their spillover efficiency or reputational benefits). Thus, the study predicts that all foreign investors have an impact on audit quality, but also expect the impact of non-Arab investors is stronger. Thus, the study draws the following two hypotheses:

H_{11 (a)}: There is a significant positive relationship between the level of Arab investment and audit quality.

H_{11 (b)}: There is a significant positive relationship between the level of non-Arab investment and audit quality.

4.1.4.2.3. Institutional ownership

Previous literature documented that institutional investors have a favourable effect over many corporate aspects. For instance, institutional investors have an evident role in reducing earning management (Chung *et al.*, 2002; Hadani *et al.*, 2011), monitoring financial reporting and increasing earning quality (Velury and Jenkins, 2006), enhancing financial performance (Hutchinson *et al.*, 2015), supporting firms' innovation and competitiveness (Kochhar and David, 1996; Xu *et al.*, 2015), and also increasing audit quality (Kane and Velury, 2004).

Further, concentrated ownership by institutions plays a crucial role in strengthening corporate governance systems (Shleifer and Vishny, 1997). Due to their fiduciary duties (Bushee, 2001), large voting blocks (Shleifer and Vishny, 1997), well business experience (Pound, 1988) and their monitoring and analytical abilities (Mitra *et al.*,

2007); institutional investors hold strong incentives and power for effective monitoring and forcing managers to behave towards maximizing shareholders wealth. Thus institutional investors are most likely to demand (or encourage management to demand) high-quality audit as an effective monitoring (bonding) mechanism.

By examining all non-regulated US industries firms between 1992 and 1996, and employing a logistic regression model, Kane and Velury (2004) provided empirical evidence of a positive association between institutional ownership and audit quality measured by dichotomous auditor size. The theory expressed in their study is that institutional owners play a role in mitigating the information asymmetry through demanding higher quality, as they have greater ability to exert further influence over management. Consistent with Kane and Velury (2004), Lim *et al.* (2013) concluded that in the presence of institutional investors, managers most likely prepare high-quality accounting reports.

However, due to their power, institutional investors have a dominant role within the firms and they have ultimate access to private information that may be used by management to exploit shareholders, and therefore decrease their incentive to report high quality earning (Velury and Jenkins, 2006). Thus, from this contra-argument about the role of institutional investors, it seems plausible to expect that the presence of institutional investors may negatively correlate with demanding high-quality audit (given a positive relationship between audit quality and earning quality as documented in the literature (Teoh and Wong, 1993; Becker *et al.*, 1998).

Khanna and Palepu (1999) argued that institutional investors in many developing countries do not offer effective monitoring as their counterpart in developed countries,

due to underdeveloped capital markets and weak regulations. In such contexts, institutional investors may avoid challenging managers' actions in order to maintain their business interests with the company even if this is to the detriment of other shareholders (Pound, 1998).

Institutional investors around the world contain generally large institutions like mutual funds, pension funds and banks as defined by Bushee (1998) and Koh (2003). Given that large financial institutions like large mutual funds or large pension funds do not exist in Jordan (Haloush and Malkawi, 2008), the major financial institution in Jordan is banks. Banks in Jordan have different control system, different capital requirements, and having investment limitations, this study has a motivation to examine the effect of this type of ownership separately from other institutional ownership¹⁴. Non-financial institution owners for this study are manufacturing and services firms.

Manufacturing and services firms are the main non-financial institutions in Jordan. These non-financial firms are involved in producing, purchasing and selling different types of goods, and they differ from financial institutions or banks as they are working under different regulations as well as they do not have constraints on their investments. These features motivate us to separate these non-financial institutions from financial institutions as another ownership identity.

Investment of these non-financial firms in other firms' shares is motivated by number of reasons. For instance, they have incentives to hold block shares in other firms as a way of vertical or horizontal business integration, or as a strategy to diversify their

¹⁴ Also, consistent with O'Sullivan (2000) that separates the institutional owners in the UK into financial and non-financial firms.

businesses against market risk (Dinga, 2011). Furthermore, (Grossman and Hart, 1986) argued that non-financial firms invest in other firms, particularly higher growth firms, to maximise their profit, expand their business network, control suppliers, support their competitiveness, or do business integration.

However, Alwshah (2009) raised a concern about the effectiveness of non-financial institution in Jordan regarding their ability to exert sufficient monitoring for a couple of reasons. First, many institutional investors in Jordan have significant business relationships with investee firms, which weakens their monitoring ability. Second, in many cases where the appointment is based on relationship rather than merit, the representative of institutional investors' interest in the board of investee firms may be in a weak position in front of managers due to lack of experience. Third, even if such members are skilled and have expertise, they have low motivation to exercise monitoring over managers, as their tenure, career prospects, and rewards are not related to the performance of the firms in which they are served.

Moreover, Al-Fayoumi *et al.* (2010) used a Generalized Method of Moment (GMM) methodology to examine the correlation between institutions' investment and earnings management (discretionary accruals) for a sample of Jordanian industrial companies listed on the Amman Stock Exchange during the period 2000 to 2005. They found an insignificant relationship between institutional investors and earnings management. Their findings indicate that institutions are generally not enough effective because they may either lack expertise, or engaged with management for their mutual benefits, ignoring other owners' interests.

In summary, the dominant arguments in literature are that institutional investors play a better monitoring role than individuals as they have more expertise and lead a professionally-managed block of shares (which is also consistent with agency theory as their role mitigates the information asymmetry and agency conflict). However, these arguments are about institutional investors (e.g. pension funds, mutual fund, or other large financial institution), and there is a paucity of studies in developing countries about role of non-financial institutions as an effective monitor. Despite of this, the study tries to provide evidence on whether the increase of institutional investment is accompanied by audit quality improvement in Jordan as one of the developing countries. Thus, the study draws the following hypothesis:

H12: There is a significant positive relationship between non-financial institutions and audit quality.

As a financial institution, banks are a special type of institutional investor as they can be owners and lenders at the same time¹⁵ (Coffee, 1991; Boonyawat, 2013). “Monitors who hold both debt and equity need not be excessively risk-prone because their attitude will reflect their weighted average position as both creditors and shareholders” (Coffee, 1991: 1332). Bank shareholding creates a close relationship between banks and other firms (investee firms) making the banks active monitoring mechanisms with lower cost, and consequently minimize the information asymmetry problem (Diamond, 1984; Coffee, 1991). Also, banks have strong incentives to collect information about firms for monitoring purposes (Diamond, 1984), and their specialized knowledge helps to reduce information asymmetry. Moreover, Tian

¹⁵ The owner-lenders situation provides an advantage as banks can offer loans to their clients (investee firms) with attractive rate of interest which decreases the cost of capital (Coffee, 1991).

(2004) indicated that banks are normally the main source of firms' loans, and if managerial agency costs are assessed at high level, banks will not renew or provide an additional loan. This prohibits management from behaving opportunistically.

On the other hand, a close relationship between banks and other companies may affect management incentives, induce companies to select unfavourable investment decisions and negatively affect companies' value (Berlin *et al.*, 1996; Mahrt-Smith, 2006). By being lenders and owners at the same time, banks may face a conflict of interest and may give priority to their private benefits at the expense of general shareholders (Lin *et al.*, 2009). For instance, banks may provide finance to corporate borrowers with higher costs, which in turn benefits bank owners and managers but other shareholders are not happy with these premiums (Coffee, 1991). Such problems may be more serious in emerging markets, where corporate governance system of both banks and companies are weak (Cull and Xu, 2000).

Many empirical studies which are from developed countries agreed about the important role of banks ownership as facilitator of capital flow and providers of effective monitoring on related companies (Diamond, 1984; Barth *et al.*, 2005). However, there is unclear evidence about the role of banks in developing countries where the corporate governance is poor and the banking system is still under-developed.

Lin *et al.* (2009) examined whether bank ownership affects firms' performance in China. Using various proxies for operating performance, growth opportunities and valuation, they found that firms with bank ownership have a negative relationship with financial performance. They argue that easy access to bank loans motivate firms

to go through more investment when not all of this is feasible. Therefore, though the general positive correlation between investment and firm performance, the investment level at firms with leading bank shareholders relates negatively with performance measures (i.e. return-on-asset). This result is suggesting that banks most likely do not exert enough monitoring over their loans in investee firms. As a result, the better access to bank loans turns into a doubled-edged sword and affects firm performance, to a degree depending on monitoring context.

From Japan, Morck *et al.* (2000) examined the effect of bank investments on firm value. Their result indicates that bank equity ownership increases the bank's ability and willingness to charge higher interest rates from the investee firms. At the same time, the study showed that large bank ownership appears to positively affect firm value, by influencing firms' investment policies, as higher level of bank ownership is associated with relaxed financial constraints, which allow companies to undertake more marginally acceptable investment opportunities.

In Jordan, banks are the main source of external funds (Al-Fayoumi and Abuzayed, 2009). All Jordanian banks are privately-owned, and there is no state ownership in these banks (a few were owned by the government but have been privatized since 1996). Banks in Jordan hold equity investment in different companies in order to diversify their risk, and to maximise their wealth (Al-Fayoumi and Abuzayed, 2009). However, banks' investment in Jordan is prohibited from holding substantial shares in other firms. Article 39 in Bank Law (2000) limits banks ownership to up to 10% in any firm's capital.

Based on the literature discussion about the positive role of banks, it seems reasonable to expect that they have incentives and power to monitor financial reporting and penalize managers who report low earning quality, and therefore are more interested in higher audit quality. Given that the bank sector in Jordan is more developed, well-managed and organized, and more committed with a corporate governance code compared to other sectors (Matar and Noor, 2007), the study therefore expects bank ownership will lead to higher audit quality. Thus, the study states the following hypothesis:

H13: There is a significant positive relationship between financial institutions (banks) ownership and audit quality.

4.1.4.2.4. Government ownership

Government ownership is not like other types of ownership (Niemi, 2006). The government representatives are not the true owners (the actual owners are the people of the state), and therefore they have control without cash flow rights. However, they still have strong incentives to exercise effective control over the management in order to protect their reputation and to protect firm's value (Niemi, 2006), and to increase the creditability to raise capital and to pass positive indications about their obligation to market oriented policies (Ben-Nasr *et al.*, 2015). Thus, in the aforementioned scenarios, it is expected that the state representatives are more willing to demand intensive and high quality audit in order to protect firms' assets, maintain their reputation or raise capital, and less care about monitoring (audit) cost.

Although some empirical studies reported potential benefits of government ownership like decreasing the probability of firms' failure by providing bailout during financial distress (Faccio *et al.*, 2006), state ownership increases agency cost (Ding *et al.*, 2007) and it raises concerns of political expropriation (Faccio *et al.*, 2006) and poor transparency (Bushman *et al.*, 2004), which adversely affect other owners and firms' value.

On the other hand, government shareholders normally have less incentive for effective monitoring as their behaviour is mainly a function of political interests (Shleifer and Vishny, 1994; Lim *et al.*, 2014). Further, Johnson and Mitton (2003) stated that in the state representatives intentionally create an opaque information environment to hide their inefficiency and corruption. In this case it is expected that these representatives may resist appointing higher quality auditors. This argument is consistent with the empirical evidences that are presented by Ben Nasr *et al.* (2015) who documented a significant negative relationship between government ownership and earning quality based on a sample of newly privatized firms over a long period of time, 1990 to 2007. This result indicates that the state has greater incentives to report lower earnings quality in order to hide the potential "tunnelling" of corporate resources for political purposes, or to hide any actions that adversely affect other shareholders.

Niemi (2005) addressed the effect of government ownership on audit quality in the Finnish market. By studying a sample of 200 non-financial companies and using data for year 1996, the study failed to find significant association between government ownership and audit quality.

Zeitun and Tian (2007) reported empirical evidence showing that government shareholding in Jordan has a negative impact on financial performance as measured by ROE. By using data for 59 public firms over the period 1989-2002; they concluded that government ownership is not as efficient as required, which leads to poor financial performance. However, since the mid-1990s, government ownership has largely decreased due to the privatization programme, and the foreign owners have increased as most of these investment were sold to them (ASX, 2014). The role of state ownership is expected to be better after completion of the privatization process (1996 to 2005) because the state ownership becomes more organized than before and focuses only on the most important and strategic investment.

Attracting foreign investors is a priority for the Jordanian government due to the limited local resources (Zeitun and Tian, 2007). So, the subsequent governments worked hard during last two decades (mainly after the privatization process) to improve the governance and disclosure system, and to increase confidence in the overall economy and financial environment to attract more investment. Therefore, it is expected that the behaviour of government representatives in the listed Jordanian firms is consistent with the overall government strategy regarding attracting investments, and then they most likely demand high-quality audit to maintain firms' value and provide positive signals for prospective investors. So, the relevant hypothesis for the effect of this type of ownership on audit quality is:

H14: There is significant positive relationship between government ownership and audit quality.

4.1.5. Conclusion and literature gap

While the corporate governance literature is concentrated in the developed markets, a little research has been conducted in countries where capital markets are less developed and where governance mechanisms are still evolving. However, high quality governance systems are equal, if not more, important in contexts that are attempting to develop their capital markets and to gain credibility among investors. MENA region¹⁶ markets and Jordan in particular attempt to boost investor confidence mainly after the economic reform plans and privatisation processes.

The prior studies, that considered the impact of corporate governance effectiveness on audit, differ from this study in many ways. They used (1) different variables of corporate governance mechanisms and ownership structure, as well as different measures for these variables; (2) different approaches and methods; (3) different control variables and their measures; (4) different timescale of the examined data; (5) different thresholds of ownership concentration, and different ownership identities; (6) different data types which requires different analysis techniques i.e. regression for one year data (cross-sectional) or regression for many years (panel or pooled regression); (7) different estimation methods; and (8) different sample nature (some studies used samples of firms which are audited by Big 4 only; or used data of particular business sector only; or sample of small and non-listed firms). See tables 4.1 and 4.2 at the end of this chapter which summarize the prior studies in details.

¹⁶ Corporate governance is relatively new in this region, the legal system is far from being perfect, shareholder protection is under-developed, and independent monitoring mechanisms are still not as strong as in developed countries.

Extending the above brief points, further explanation about the study's important contribution is summarized as follows. First, most of the relevant literature considered one or a few corporate governance mechanism(s) only and omitted other variables which (if the omitted variables related to the included variables) may make the estimated coefficient of the included variable both biased and inconsistent (Kmenta; Rediker and Seth, 1995).

Furthermore, failure to consider all relevant explanatory variables may lead to inconsistent and/or ambiguous findings, as well as lead to exclusion bias (Dinga, 2011). Also, Niemi (2005: 305) stated "a significant omission in most fee models is controlling for ownership structure. If client ownership structure has an impact on audit production and fees, omitting it from the analyses of audit markets characterized by a wide range of client ownership structures increases the risk of incorrect conclusions".

Hence, given the shortage of included variables in the previous models employed, and given that the monitoring effectiveness emerges from mixed of corporate governance mechanisms rather than from just one (Rediker and Seth, 1995); this study targets a broad set of relevant variables which is expected to give more clear and robust results. To do so the study employs an augmented audit fees model which considers all measurable characteristics of boards of directors and audit committees, as well as all ownership types within the study environment as explanatory variables.

Second, previous literature used different thresholds for ownership concentration. Mitra et al. (2007) used 5%, Hay et al. (2008) used 20%, O'Sullivan (2000) used 3%. Wiwattanakantang (2001: 326) stated "The reason of choice of the cut-off points is

not clear. It often looks like an ad hoc choice. The choice of cut-off points should be based on economic or legal frameworks of the given country”. Thus, this study is interested in examining the effect of all level of ownership. In this regard, because Jordanian companies are mandated to disclose ownership of 5% and above, the study will consider 5% as an ownership concentration threshold.

Third, given that company size is a main determinant of audit fees (Simunic, 1984; Abbott *et al.*, 2003), and has overwhelming influence over other firm characteristics; scaling audit fees according to firm size is essential to mitigate spurious correlations due to size and to reduce heteroscedasticity, and therefore to obtain better inferences at the end. Apart from Carcello et al. (2002); Abbott et al. (2003); Mitra et al. (2007), none of the previous literature considered this point, which makes the reported relationship with audit fees questionable as firm size is an important determinant of fees paid and dominates all other variables.

Fourth, the study considers all salient ownership identities in the Jordanian market, which are family owners, foreign owners (Arab-foreign owners and non-Arab foreign owners), government, financial institution and non-financial institution owners. The previous studies about ownership structure and audit quality tend to be focused on one ownership type, e.g. family ownership (Niskanen *et al.*, 2010); or institutional ownership (Kane and Velury, 2004; Mitra *et al.*, 2007); or ownership concentration itself (Piot, 2001; Hay *et al.*, 2008), notwithstanding that Niemi (2005) examined both foreign and state ownership.

Fifth, apart from Niemi (2005) this study is the first study, to the best of my knowledge, which examines the effect of government ownership and foreign

ownership on audit quality. Niemi (2005) examined a sample of 200 non-financial companies in the Finnish context for 1996. The sample was limited to the firms that are audited by Big Six only due to data accessibility. He used dummy variables for foreign and state ownership (1 if the majority of shares are owned by the state, 0 otherwise). Given that Foreign investment has become essential to global economic development, with flows exceeding US\$1.5 trillion in 2011 (UNCTAD, 2012), and given that the openness of Jordanian capital market to foreign investors in recent years is associated with a greater demand for better corporate governance and high transparent financial numbers; it is worthwhile to study whether foreign ownership has association with high-quality audit.

Sixth, the subject of board diversity has recently attracted more attention from regulators around the world. Further, a well-established management and psychology literature documents that female directors are more risk averse and more sensitive to loss (Watson and McNaughton, 2007). Also many corporate governance studies suggest that existence of female in the board of directors improves the monitoring process (Terjesen *et al.*, 2009) and financial performance (Adams and Ferreira, 2009). Given these pieces of evidence, none of the previous studies (except a working paper was done in the US by Gul *et al.*, (2012)) addressed the effect of gender diversity in the board on audit quality.

Seventh, all relevant literature used data for one financial year, and consequently did the analysis through cross-sectional regression (except Zaman *et al.*, 2011; Rustam *et al.*, 2013; Hay *et al.*, 2008; Niskanen *et al.*, 2010; Vafeas and Weagelein, 2007; Basiruddin, 2011). Methodologically, Vafeas and Waagelein (2007) stated that the cross-sectional approach may give biased estimates of the relationship between

company characteristics and audit fees due to the endogenous determination of company characteristics and audit fees. To mitigate this problem, Vafeas and Waagelein (2007) suggest taking consideration of the parallel changes in the potential determinants of audit fees by employing additional years of audit fee data, i.e. comparing a firm to itself at a different time period. So, this study employs a data-set includes observations for different entities (115 Jordanian listed firms) over more than one year (six years from 2009 to 2014). Given this feature of the data-set, the panel approach in analysis is more appropriate. The panel data approach plays important role in controlling variables which are not observed or measured across entities or variables that may change over the time period but not in a consistent manner (Wooldridge, 2010).

Eighth, the study contributes to the methodology literature by considering the analysis using different estimation methods including fixed-effect method, random-effect method and robust standard error estimation method, to ensure the validity of the data analysis. Finally, this model provides a detailed and timely review of corporate governance characteristics and ownership structure for a unique database which is hand-collected from a sample of 690 firm-year observations of all non-financial Jordanian listed companies between 2009 and 2014. This work significantly contributes to the existing body of knowledge, by providing more details about firm-level corporate governance structures in Jordan as one of the Middle East and North African (MENA) countries. Furthermore, it has implications for regulatory authorities, professional bodies, corporate managers and boards, and academics.

Part two: Literature review and hypotheses development (second model)

4.2.1. Introduction to the second empirical model (questionnaire survey)

As discussed at the beginning of the thesis, the study seeks answers to the following research questions:

RQ1: Do boards of directors and audit committees, as corporate governance mechanisms, have a significant impact on audit quality in a developing market like Jordan?

RQ2: Is the level of audit quality in Jordan related to the common ownership identities?

RQ3: What changes to the extant governance regulatory framework do respondents believe would most improve audit quality?

The first two empirical questions are examined based on the secondary data in the first model. However, the views of the important players in the corporate governance system about the role of these mechanisms, which are important, are still missing. So it would be useful to understand how the main practitioners in the governance system view corporate governance mechanisms and how these mechanisms affect audit quality; this area is under-researched.

Consequently, the second model of the thesis, the questionnaire survey, tackles these two questions from the perceptual viewpoints of members, of directors, audit committees members and external auditors. This, therefore, provides a clearer understanding of how these respondents perceive the impact of these corporate governance mechanisms on audit quality.

The way different groups think about the role of these mechanisms may provide useful feedback for the regulatory bodies when considering current corporate governance practices.

The overall purpose of this research is to obtain further insights into the impact that boards of directors and audit committees, as well as different ownership identities have in promoting high audit quality. Given this, the questionnaire survey will complement the first model by exploring an extended set of attributes/activities of boards of directors and audit committees that are difficult to measure using the methodology of the first model (i.e. not available in the published secondary data). In other words, the second model (survey approach) can, therefore, support and complement the findings derived from the secondary data model. In more detail, the second model examines the variables that are included in the secondary data model but by different methodology, and at the same time, it goes further and examines the other corporate governance attributes that have not been examined in the first model. By doing this, the study will complete the picture of the role of corporate governance mechanisms, as suggested by the local governance regulation, on audit quality.

Also, the study is motivated to further understand the results of the secondary data model (the first model), which revealed a negative correlation between board size and audit quality, and also a negative correlation between gender diversity and audit quality. This will be carried out by the survey model (the second model), by asking the respondents about their views regarding the potential consequences of having a large board size and having women in the board of directors.

In the first model of this thesis, audit fees have been used to capture audit quality in Jordan as the most appropriate audit quality indication in such a context. Thus, the survey model aims to test views of the respondents about the potential indicators of audit quality (Big 4 affiliates,

firm size, and industry specialisation as commonly reviewed proxies in the literature) in order to confirm the relevance of the audit fees proxy in Jordan, and also to see if the respondents provide different answer.

On the other hand, taking into consideration the important role of the respondents in the corporate governance system, and given that the Jordanian corporate governance code is in its infancy; the third research question aims to look beyond the current governance recommendations to gain a complete understanding of the characteristics that determine boards of directors' and audit committees' effectiveness. This is by asking these relevant respondents regarding possible improvements to the current code (board of directors and audit committee-related suggestions) that they feel are important in promoting audit quality, apart from what is already recommended in the current governance code.

4.2.2. Corporate governance and audit quality from perceptual viewpoints: hypotheses development

4.2.2.1. Perceived role of boards of directors and audit quality

A large and growing body of literature has investigated the role of the boards of directors and their quality in different corporate aspects. As an essential governance pillar, boards of directors have the ultimate responsibility for the functioning of the firm (Jensen, 1993) and their role includes a broad range of duties, powers, and responsibilities.

Boards of directors have fiduciary duties to prepare credible financial statements, maintain firms' financial records and protect shareholders interests. The directors' role has grown in importance in light of recent governance regulations. The Jordanian Corporate Governance

Code (2008: 9) places more emphasis on directors' responsibilities such as "(a) setting strategies, policies, plans and procedures that realise the objectives of the company, serve its interests, and maximise the rights of its shareholders, (b) setting necessary procedures to ensure that all shareholders, including non-Jordanians, enjoy their full rights and that they are treated in justice and equality without any discrimination, (c) taking necessary measures to ensure compliance with the laws in force, (d) organising the company's financial, accounting and administrative affairs by means of special internal regulations, ... (g) Setting the company's disclosure and transparency policy, and overseeing its implementation in accordance with the requirements of the regulatory authorities and the laws in force, ... and (j) appointing the company's general manager and terminating his services".

Several attempts have been made to report the correlation between characteristics of boards of directors and audit quality. What we know about the role played by directors is largely based upon empirical studies that employ secondary data. The previous studies however failed to address many of directors' characteristics/activities that have been highlighted by recent governance regulation and are difficult to be captured through those the secondary data studies

Given the importance of survey studies to refine our understanding in this matter, there is a paucity of this type of research. Nevertheless, the survey carried out by Cohen *et al.*, (2013) aimed to provide deep insights into the perceived effectiveness of governance regulations (e.g. board of directors-related regulations) in improving financial reporting and audit quality. The directors included in the study sample have expressed their opinions, which generally support the view that extant governance regulations strengthens boards' monitoring role. This confirms the findings of Cohen *et al.*, (2004) and Bedard and Gendron (2010).

Moreover, Goodwin and Seow (2000) explored the perceptions of directors, investors and auditors in order to identify their opinions about corporate governance effectiveness (e.g. board structure). In this survey, the Singaporean respondents have been asked to indicate the optimal number of independent directors, the optimal board size to ensure effective corporate governance, and whether they support chairman-CEO separation. The results showed that 36% of the respondents considered that the majority of board members should be independent and they also supported the separation of the position of CEO and chairman. This result highlights importance of board independence and separation of chairman position from CEO position, and this is therefore consistent with agency theory that assumes more independent board is favourable as it leads to more effective monitoring over executive management.

By eliciting the opinions of 148 Australian directors, Nicholson and Newton (2010) highlighted how directors perceive their role in many activities (governance activities among those). The findings showed that the directors placed significant importance in their governance role e.g. defining their responsibilities within the governance system, engaging with management when defining the respective responsibilities of the board, and periodically reviewing and assessing management performance. The governance regulations across the world (JCGC among those) encourage boards of directors to take into account these responsibilities that therefore indicate for a diligent/effective board.

Furthermore, Masood Foladi (2011) carried out a survey to explore the opinions of external auditors on the implications of corporate governance mechanisms for the audit process. Based on the respondents' views, the most essential characteristics of corporate governance are board independence and audit committee independence. External auditors view boards of directors and audit committees as effective governance mechanism with respect to financial

reporting quality (boards of directors have been perceived as more powerful than audit committees). Further, the auditors have less confidence in the board when they are not independent. The auditors also believe that when the chairman holds the CEO position, the board's ability to monitor and control management is diminished as a result of a lack of independence and a conflict of interest, which in turn leads to a less effective board. Audit committees with independent members are perceived to be more effective in protecting the external auditors from client pressure, as well as reducing the incidence of financial reporting problems and fraud.

Goodwin and Seow (2002) examined the perceptions of external auditors and board members regarding the effect of different corporate governance mechanisms on financial reporting and audit quality. One of the main focuses was whether firms' abilities to prevent and detect financial statement fraud and auditors' abilities to perform effective audit work are influenced by directors' effectiveness. The findings reported that effective directors have an impact in preventing financial statement fraud, detecting management misbehaviour and improving audit quality.

Further to the above empirical discussion, boards of directors are expected to play a significant role in ensuring higher audit quality, as well as monitoring and facilitating the external auditors' work. The relationship between boards of directors and external auditors is derived mainly from the oversight role of the board as follows. First, given that the board of directors has an oversight role over auditing and financial reporting processes, the external auditors provide a high quality audit in order to satisfy the boards' expectations and to maintain a good relationship with their clients (Carcello *et al.*, 2002 and Beasley, 1996). Second, the board of directors ask for high audit quality to maintain shareholders' interests and to protect their reputations, i.e. approving untruthful financial statements can destroy

directors' reputations (Carcello *et al.*, 2002). Finally, the board of directors (and the audit committee) review the audit work and scope, and they have ultimate authority to select, evaluate, and, where appropriate, replace the external auditor (Blue Ribbon Committee, 1999).

Boards of directors play an important controlling and monitoring role over all corporate activities (Jensen and Meckling, 1976), and, in particular, they play an essential role in demanding and monitoring the external auditing. Consistent with agency theory assumptions, the effective boards of directors are expected to demand high audit quality to protect corporate assets and to bridge the gap between agents and principals by curbing managers' misbehaviour and make sure that those managers are acting in the best interest of the company.

The aforementioned discussion highlights the role of boards of directors in preventing financial statement error and ensuring credible audit quality as perceived by different respondents. The agency theory also hypothesizes that boards of directors act as an effective monitoring mechanism not just like a rubber stamp. Therefore, the study assumes that perceptions of the respondents will be in line with the monitoring approach which therefore contributes positively to audit quality. Thus, the study then draws the following hypothesis:

H1: There is a presumption amongst boards of directors, audit committees and auditors that the role of boards of directors is positively associated with audit quality.

4.2.2.2. Perceived role of audit committees and audit quality

Because of the significant expanded responsibilities attached recently to the role of the audit committee and because of the increased concerns about the quality of the corporate financial reporting process caused by recent accounting scandals, the role of audit committees has come under close scrutiny by both regulators and academics. In particular, this role has achieved greater importance since the 1990s after the enactment of a number of relevant regulations around the world. In Jordan, the Corporate Governance Code was enacted in 2008 to boost investors' confidence and develop the financial market. All these regulations have emphasised the necessity of audit committees' existence and their role in improving financial reporting quality (Turley and Zaman, 2004; Ghafran and O'Sullivan, 2012).

Previous literature and discussion have primarily been based upon annual reports' disclosures to measure audit committee effectiveness (Zaman *et al.*, 2011; Abbott *et al.*, 2003, Carcello *et al.*, 2002; Turley and Zaman, 2004; Collier and Gregory, 1996). However, little is known about what effective corporate governance practices regarding audit committees perceive as important in ensuring credible audit quality (i.e. role of audit committee in audit quality from perceptual viewpoints). Contessotto and Moroney (2013) reported that as it is difficult to observe actual audit committee effectiveness, thus survey method offers more reliable inferences.

There have been relatively few opinion surveys regarding audit quality and what the important governance dimensions and determinants are. In an early study, Carcello *et al.* (1992) carried out a survey of the beliefs of financial statements' preparers, external auditors and users within the US context. Responsiveness to client needs, compliance with the general standards (competence, independence and due care) and compliance with auditing standards were generally perceived to be more important in audit quality.

About 82% of the 253 US audit committee members believed that audit quality had improved after SOX, as per a survey carried out by the Centre for Audit Quality (2008). The perceived improvement in audit quality from audit committee members' viewpoint was due to the level of communication with audit committees, the increased oversight role of audit committees, the increased emphasis on auditors' quality; and more effective audit committee oversight over auditors.

Furthermore, a survey of perceptions of US directors revealed that the impact of governance regulation on the relationship between external auditors and audit committees has improved audit quality. Cohen *et al.* (2009) reported that the Sarbanes Oxley Act (2002) strengthens the relationship between the audit committee and the external auditor. This positive association is mainly due to the enhanced expertise, experience, diligence, transparency and authority of the audit committee. The external auditor – audit committee alignment and communication, as well as the improved effectiveness of the audit committees were identified as important in improving the quality of financial reporting.

DeZoort (1997) examined audit committee perceptions regarding their oversight role within firms. The findings show that many US audit committee members believe they do not have the required oversight expertise related to accounting and auditing, and they have agreed about the importance of holding sufficient expertise in these oversight areas. The results also indicate that audit committee members perform different roles beyond what is listed in the proxy statement and therefore agreed to expand their oversight responsibilities.

Moreover, the survey of audit committees' perceptions that was carried out by DeZoort (1997) shows that audit committees place more weight on internal control evaluation and perceive this as one of the most important areas of their oversight. This is in line with the

importance placed by different legislations on the role of the audit committee in evaluating and monitoring internal control systems. The survey also revealed other duties considered important, as perceived by audit committee members, includes evaluating the effectiveness of external auditors, and reviewing the financial statements. Evaluating special transactions and recommending and setting audit fees for the auditor were perceived as not important.

Furthermore, by exploring the perceptions of 87 audit committee members, DeZoort (1998) evaluated whether audit committee members with experience in auditing and internal controls would make different internal control evaluations than members without this experience. His results indicate that the audit committee members with experience are more likely than those without such experience to make control evaluations more consistent with external auditors. The audit committee members with greater experience demonstrated a higher level of consensus and have a better understanding of the auditor's role in disputes with management and are likely to assist the auditors in their dispute.

Another study examining the perceptions of audit committee members with respect to the perceived importance of audit committee independence was carried out by DeZoort and Salterio (2001). The study tested the judgments of 68 audit committee members whose opinions were explored to determine the level of support they provided for the auditor vis-à-vis management, in a situation including a disagreement over ambiguous accounting issues. The results supported the view that independent, well experienced audit committee members were more likely to support the auditor in a dispute with management.

By eliciting opinions of among chief operating officers, internal auditors, external auditors and audit committee chairs, Haka and Chalos (1991) examined factors that form complete financial statement disclosure and factors that should influence accounting procedure choice.

They concluded that audit committee members tend to be interested in more disclosure than other groups. Moreover, the opinions of audit committee chairs and external auditors were not consistent regarding the impact of a number of factors (e.g. audit cost) that are important in the financial reporting process. External auditors and management have agreed on what should form financial statement disclosure and what should impact on accounting choice.

Opinions of audit committee chairs, financial officers and audit partners were surveyed by Beattie et al. (2013) to explore what regulatory and economic variables contribute to audit quality. The three groups of respondents rated various audit committee interactions with auditors among the factors most enhancing audit quality. Overall, perceptions of all respondents stress the role of the audit committee in ensuring audit quality. Though the perceptions of the different groups are consistent to some extent, there are some different opinions attributable to their different roles and responsibilities. Audit committees are particularly enthusiastic about the regulatory recommendation about audit committees, e.g. their responsibility for recommending the appointment, reappointment and removal of auditors to the board as well as approving the remuneration of the external auditors.

Evidence from developing markets comes from Kamel and Elkhatib (2013) who employed a questionnaire survey to examine the respondents' perceptions (external auditors and financial managers or senior accountants) with respect to the role of audit committees in Egypt and their potential effect on financial reporting quality. The findings indicate that "reviewing significant changes in accounting policies" is the most important task for an effective audit committee, followed by internal control evaluation. The results also show that the vast majority of respondents have rated the independence of audit committee members and their financial experience as the most important attributes that should be considered when selecting the members of an audit committee. Finally, the study reported that the existence of a well-

functioning audit committee is perceived as an effective corporate governance mechanism in restricting the incidence of financial statement fraud in Egypt.

Beasley *et al.*, (2009: 66) have designed a survey study to offer detailed insights into the effectiveness of the oversight role of audit committees. By exploring the responses of 42 audit committee members, they concluded that “many audit committee members strive to provide effective monitoring of financial reporting and seek to avoid serving on ceremonial audit committees”.

Cohen *et al.* (2002) suggested that auditors perceived audit committees to be lacking in effectiveness and power, and their role in communicating with the auditors was usually passive. Instead they perceived that boards of directors play a more active role. However, Stewart and Munro (2007) argued that these findings may not hold at the current time as audit committees get more attention and many related regulations are enacted, so further research is therefore needed.

By surveying the perceptions of external auditors and boards of directors who are heavily involved in corporate governance in Singapore, Goodwin and Seow (2002) examined the perceived effect of the audit committee, internal control and the corporate code of conduct on financial reporting and the audit process. All of these mechanisms have some influence on financial reporting and audit quality. However, some differences were documented between two groups of respondents – auditors and directors; directors emphasised enforcing the corporate code of conduct while auditors have greater confidence in an effective internal control system.

From the Australian context, (Stewart and Munro, 2007) examined auditors’ perceptions of the formation of an audit committee, the frequency of audit committee meetings and the

auditor's attendance at those meetings on various aspects of the external audit. They pointed out that auditors believe that the existence of an audit committee significantly decreases the perceived audit risk and also the reduction in risk is influenced by meeting frequency and the audit partner's attendance at meetings.

Notwithstanding the range of opinions highlighted above about their effectiveness, audit committees are formed to assist boards and essentially oversee financial reporting and auditing activities (Dobija, 2015). Given this role, audit committees are expected by regulators to play a dominant role in monitoring and facilitating the external audit function, and therefore improving audit quality. Their role is clearly highlighted by the Jordanian corporate governance code (2008) and it takes different forms.

First, reviewing and approving the appointment, reappointment, and removal of the external auditor, reviewing the independence and objectivity of the external auditor, and reviewing and approving the audit fee. Such activities might enhance auditors' independence and improve audit quality. Prior studies confirmed that the existence of an effective audit committee increases the external auditor's independence because it make them free of management control, and it provides a channel of communication and resolves any problems that may arise between management and the auditor (Cadbury, 1992; Carcello and Neal, 2003; Lee *et al.*, 2004; Turley and Zaman, 2004).

Second, the interactive communication between external auditors and the audit committee may increase audit quality (Truly and Zaman, 2004). JCGC (2008) grants the audit committee authority to communicate regularly with external auditors, to assess the external auditor's plan of work, to approve the external auditor's evaluation of control procedures, to reviews its periodic and final reports and to discuss matters related to the audit, and therefore

make relevant recommendations to the board of directors. Regular communication between audit committee members and auditors could protect auditors from influence by management on accounting issues and thereby enhance audit quality.

Third, the audit committee in Jordan plays a role in evaluating and supervising the internal control procedures to ensure its effectiveness. Lee *et al.* (2004) and Turley and Zaman (2004) pointed out that effective internal control helps in preventing reporting failure and management cheating, and in turn helps the external auditing process. Fourth, audit committees discuss matters related to the nomination of the auditors to ensure that they meet the requirements, and make a recommendation to the board of directors about their appointment (JCGC, 2008).

From the agency theory perspective, audit committees are assumed to play active rather than passive monitoring roles; i.e. audit committees are assumed to be effective in carrying out their oversight tasks, monitoring management behaviour, and monitoring the auditing process, and this, in turn, increase the confidence in the financial statements and reduce agency conflict (Fama and Jensen, 1983).

So, in addition to the above discussion of the empirical evidence and the agency theoretical framework, and given the highlighted role of the audit committee in the audit process throughout Jordanian regulation, as well as the reported findings of the first model; the study expects the role of audit committees in audit quality to be positive as perceived by the respondents, and draws the following hypothesis:

H2: Audit committees are perceived by boards of directors, audit committees and auditors to improve audit quality.

4.2.2.3. Perceived role of ownership structure and audit quality

The second research question asks whether audit quality is contingent upon different types of ownership. Since the first empirical model has examined this using secondary data, the second model examines whether the various ownership identities have an impact on audit quality as viewed by directors, audit committee members and external auditors. Previous literature and discussions have been primarily based on annual reports' disclosures to examine the effect of ownership structure on audit quality. However, there is a paucity of knowledge about the perceived role of different ownership identities in ensuring credible auditing.

The concentration of ownership is considered as an internal corporate governance mechanism in order to protect investors' interests, especially in developing countries where the legal system is weak and does not offer enough protection for investors (Shleifer and Vishny, 1997; La Porta 1999). As large capital providers, blockholders have a significant role in monitoring and controlling managers' decisions due to their ownership magnitude/voting power, and because they are better informed than individual investors, due to the analytical and information processing resources at their disposal (Jensen, 1993; Mitra and Cready, 2005; Khan *et al.*, 2011). This leads to there being less information asymmetry and then less agency conflict.

In addition to controlling management misbehaviour, large shareholders may demand a high audit quality for other reasons, e.g. large shareholders may ask for additional audit quality to monitor their investments and to protect their reputations, they might need additional and reliable information regarding the firm's performance, and therefore they might expect the

auditors to compensate for a lack of control over other internal activities (Hay *et al.*, (2008), and to assure minority shareholders that their interests are sufficiently protected (Fan and Wong, 2005; Piot, 2001). This, in turn, highlights the role of credible audit quality in protecting firms' assets and owners' reputations, and to align majority-minority interests.

From eight East Asian countries which are characterised by ownership concentration, Fan and Wong (2005) examined whether external auditing plays an effective role as a corporate governance mechanism in such contexts. They found that high ownership concentration is associated with demanding more credible audit. They explained that the reason behind this result is that the large shareholders are interested to employ high-quality monitoring mechanisms to avoid the expropriation by management and assure other shareholders that their interests are protected. This result is in line with the agency theory propositions that says the controlling owners ask for high-quality audit in order to enhance the confidence of investors by decreasing information asymmetry. On the other word, given the demand for audit quality depends on the agency conflict level; higher audit quality is expected in this case to protect minority interests as suggested by agency theory.

On the other hand, given that the different types of shareholders have different investment policies and then different degrees of incentives and abilities to exert effective monitoring (Lim *et al.*, 2014), it is expected that these different ownership types will demand a different degree of audit quality to protect firms and minority owners' wealth. Shareholders in Jordan typically are categorised into four main types: families, foreigners, government and institutions (banks and other institutions). Given that there is a paucity of relevant research from perceptual viewpoints, the study has a motivation to obtain more insights about the role of these ownership types in ensuring audit quality.

Consequently, in the light of the above discussion, the study develops the following hypothesis:

H3: There is a presumption amongst boards of directors, audit committees and auditors that the different ownership types in Jordan are positively contributed to audit quality.

4.2.3. Conclusion and literature gap

As essential governance mechanisms, boards of directors and audit committees have the ultimate responsibility for the functioning of the firm (Jensen and Meckling, 1976 and Jensen, 1993). Several attempts have been made to report clear correlation between characteristics of boards of directors and audit quality. What we know about the role played by boards of directors and audit committees is largely based upon empirical studies that employ secondary data. The previous studies however failed to address many of directors' characteristics/activities that have been highlighted by recent governance regulation and are difficult to be captured through the secondary data studies.

The role of boards of directors includes a broad range of duties, powers, and responsibilities e.g. monitoring firm's financial system, monitoring management, setting the risk management and disclosure policies, ensuring that the executive managers have the appropriate qualifications and experience needed to carry out their duties effectively, taking necessary procedures to ensure compliance with the relevant regulations in force. Boards of directors also should have an appropriate composition, diligence, and have appropriate knowledge resources. The importance of these attributes of boards of directors is underscored by Jordan Corporate Governance Code (2008) as an indication of board effectiveness in carrying out their duties effectively and, in particular, ensuring the integrity of financial statements.

The reported literature in the second part of this chapter focuses on how effective boards of directors are perceived to be. However, these studies that consider perceptions of respondents suffer from a narrow focus on limited board attributes, e.g. board independence (Goodwin and Seow, 2000; Masood and Foladi, 2001), board monitoring over financial reporting

(Cohen et al., 2013), assessing management performance (Nicholson and Newton, 2010). Other attributes of the boards of directors that have been rated, by JCGC (2008), as important for ensuring financial statement quality have not yet been examined.

In terms of audit committees, as the second corporate governance pillar, the reported literature focuses on the perceived importance of having a strong relationship between audit committees and external auditors, audit committee experience, and diligence (Cohen et al., 2009 and Beattie et al., 2013), audit committee independence (DeZoort and Salterio, 2001; Kamil and Elkhatib, 2013), monitoring the auditing process, reviewing financial statements, reviewing internal control system, and reviewing audit fees (DeZoort, 1997, DeZoort, 1998; Kamil and Elkhatib, 2013), audit committee's formation and frequency of meetings (Stewart and Munro, 2007).

However, similarly to what has been mentioned regarding boards of directors above, these studies focus on narrow attributes of audit committees. Other audit committee attributes, as recommended by JCGC (2008), which are expected to play positive role in ensuring high audit quality have not yet been examined, e.g. the role of audit committees in reviewing and approving significant accounting policies, monitoring and reviewing financial risk management systems, reviewing the independence of the external auditor, reviewing and approving types and fees of non-audit service, reviewing and approving the appointment, reappointment and removal of the external auditor, and acquiring relevant information and monetary resources from management to achieve their duties effectively.

Since this study aims to examine the extent to which the corporate governance practices in Jordan contribute positively to audit quality; the study will take into account an extended set of attributes/characteristics of boards of directors and audit committees which are highlighted

by JCGC (2008) (as mentioned briefly in the above paragraphs and discussed extensively later in the methodology and discussion chapters). The opinions of members of boards of directors, audit committees, and external auditors, as important players in the corporate governance system, about the effect of these governance mechanisms on audit quality offer deep insights into the role of current governance practices in ensuring high audit quality in Jordan and may provide useful feedback for the regulatory bodies in particular to consider current corporate governance practices.

Moreover, the Jordanian market is characterised by different identities of shareholders, e.g. family owners, foreigners, government and institutions (banks and other institutions). Provided that the different types of shareholders have different investment policies and then different degrees of incentives and abilities to exert effective monitoring (Lim, How, & Verhoeven, 2014), it is expected that these different ownership types will demand a different degree of audit quality to protect firms and minority owners' wealth. The results of examining the effects of these types of ownership may have a potential impact on the behaviour of investors and may affect their concerns that these types of shareholders may have an adverse effect on corporate assets and shareholders' interests.

Given the importance of refining our understanding in this matter, it is worth saying this is the first study that examines the perceived effect of ownership type on audit quality. The findings will also augment the first part's inferences and will offer more insights about the role of these ownership types in ensuring audit quality.

Table 4.1: Summary of the literature which considered impact of corporate governance (board of directors and audit committees) on audit quality

Authors	Country	Independent variable(s)	Sample & Methodology	Main Findings
O'Sullivan (1999)	UK	Board independence, role duality, and audit committee size.	146 largest companies (measured by market capitalization) listed on the London Stock Exchange at the end of December 1995. OLS for Log of audit fees was employed.	No significant relationship between all of the study variables and audit fees.
O'Sullivan (2000)	UK	Board of directors' independence, role duality, and ownership concentration directly after adoption of Cadbury report.	402 listed firms in the UK for year 1992. OLS for Log of audit fees was employed.	Proportion of non-executive directors are positively related to audit fees level, and no relationship between large blockholders or role duality on audit quality measured by audit fees.
Tsui <i>et al.</i> , (2001)	Hong Kong	Board independence.	1038 quoted firms in Hong Kong in years 1994-1996. OLS regression was used.	Negative relationship between board independence and audit fees.
Carcello <i>et al.</i> , (2002)	USA	Board of directors' independence, role duality, board meetings, audit committee independence, audit committee expertise, and audit	Used a regression for one year ended in March 1993, for Fortune 1000 companies. They considered the Big 6	Positive relationship between all board characteristics and audit fees. When they added audit committee variables to the model they did not find any

		committee meetings.	clients only.	relationship between audit committee characteristics and audit fees
Abbott <i>et al.</i> (2003)	USA	Board of directors' independence, board meetings, audit committee independence, audit committee expertise, and audit committee meetings.	Used cross-sectional regression for 492 US Big 5-audited firms between February 5, 2001 and June 30, 2001.	Positive relationship between audit committee independence and financial expertise, and of audit fees. No significant relationship between and number of audit committee meetings and audit fees.
Lee & Mande (2005)	USA	Audit committee independence, and frequency of audit committee meetings. Also, whether Bumiputera-controlled firms pay higher audit fees.	792 US firms that audited by Big 5 only for year 2000. Single equation models estimated using OLS and the simultaneous equation models estimated using two-stage least squares (2SLS).	Positive relationship between Audit committee independence, and frequency of audit committee meetings and audit fees.
Yatim <i>et al.</i> , (2006)	Malaysia	Board of directors' independence and frequency of audit committee meetings.	Cross-sectional regression of 736 listed firms for the year ending in 2003.	Positive relationship between external audit fees and board independence, audit committee expertise, and the frequency of audit committee meetings. Further, the study found a strong negative association between audit fees and Bumiputera-owned firms.
Vafeas & weagelein (2007)	USA	Audit committee independence, audit committee expertise, and audit	<i>Fortune</i> 500 firms and spans the 2001–2003. OLS regression for each year	Board independence, size, and meetings, and audit committee independence, experience, and

		committee size.	separately and then for all years together (pooled).	size, are all positively associated with audit fees.
Gul <i>et al.</i> , (2012) (Working paper)	USA	Gender diversity in the board.	A sample of US firms from 2001 to 2003. A pooled cross-sectional regression was used.	Existence of female, as well as proportion of female in the board related audit effort proxied by audit fees. Also, non-executive female demands more audit effort.
Bliss (2011)	Australia	Board of directors' independence and board size.	950 Australian non-financial firms in 2003. OLS regression.	Positive correlation between board independence and audit fees. However, the relationship turns to be insignificant in the presence of CEO duality. Board size positively correlated with audit fees.
Zaman <i>et al.</i> , (2011)	UK	Audit committee independence, audit committee expertise, and audit committee meetings, and audit committee size.	135 UK listed companies. Utilised pooled OLS regression.	Significant positive association between audit committee effectiveness and audit fees.
Rustam <i>et al.</i> , (2013)	Pakistan	Committee effectiveness and CEO Compensation Incentives.	Used panel data regression for 50 Pakistani firms.	Audit committee activity and committee member's independence are positively associated with audit fee levels.

				In contrast, CEO pays incentives neither complements nor substitutes for audit effort in disciplining company management.
Rainsbury et al., 2009	NZD	Audit committee independence and expertise	87 listed firms in New Zealand. OLS regression for year 2001.	The relationship between audit committee quality and audit quality was insignificant. No relationship between audit committee quality and the quality of financial reporting.
Basiruddin (2011)	UK	Board & audit committee characteristics, audit fees and earning management	FTSE 350 firms over years 2005-2008. OLS pooled regression is used in particular	Board independence correlated positively with audit fees. Also, higher quality auditors are likely to reduce earnings management.
Collier and Gregory (1996)	UK	Audit committee existence	A regression model for audit fees of a sample of FTSE 500 at the end of 1991.	A positive relationship between audit fees and the presence of an audit committee.
Goodwin-Stewart and Kent (2006)	Australia	Audit committee existence, audit committee characteristics and internal audit.	OLS regression for a sample of 401 Australian firms for one year 2000 (a questionnaire survey sent to Australian listed companies seeking information on their internal audit activities)	Higher audit fees are related to the existence of an audit committee, more frequent committee meetings and increased use of internal audits. However, no significant relationship between audit committee expertise and audit fees.

Krishnan & Vesvanthan, 2009	US	Audit committee financial expertise	sample of S&P 500 for the years 2000 – 2002	Negative relationship between accounting financial expertise in audit committees and audit pricing.
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Table 4.2a): summary of studies about role of concentration ownership and ownership identities in audit quality				
Author(s)	Context	Variable studied/study aim(s)	Methodology	Main results
Mitra, Hossain & Deis (2007). Institutional investors	US	Ownership characteristics and audit fees; Comparing the effect of small institutional shareholders (less than 5%) and large institutional shareholders (5% and more) on audit fees.	Cross-sectional least square regression model, Only for US industrial firms that are engaged in manufacturing & merchandising operation and that only audited by Big 5 firms- for year 2000. R2 is 66.9%	Revealed evidence of a significantly positive relationship between diffused institutional stock ownership (i.e., having less than 5% individual shareholding) and audit fees, and a significantly negative relationship between institutional blockholder ownership (i.e., having 5% or more individual shareholding) and audit fees.

Lasse Miemi 2005;	Finland	Foreign ownership (foreign-owned subsidiaries), state ownership and audit fees in Finland.	<p>Examined sample of 200 non-financial companies in Finnish context for year 1996. The sample limited to the firms that are audited by Big Six only due to data accessibility.</p> <p>He used dummy variables for foreign and state ownership (1 if majority of shares owned by state, 0 otherwise). R2 is 48%</p>	Audit fees as proxy for audit quality are higher in foreign-owned subsidiaries. Also, no difference between companies owned by the state or and companies with a more diverse ownership structure can be found.
Niskanen et al., 2010	Finland	Family ownership & audit quality (Limited to private family firms).	<p>Finnish private firms for fiscal years 2000 to 2006. Using The logit regression model. big4 Dummy variable R2 16%</p> <p>Big 4 model used to capture audit quality.</p>	Their conclusion indicates Family owners increase firms' incentives to employ Big 4 audit firms to increase their financial statements' credibility.
Kane & Velury (2004)	US	Institutional investors and audit quality	Sample of all non-regulated US industries firms between 1992 and 1996, and employing logistic regression model for auditor size.	Positive association between institutional ownership and audit quality measured by dichotomous auditor size.
Hay, Knechel & Ling (2008)	New Zealand	Ownership concentration, Internal audit, existence of audit	A sample consists of 130 Companies. OLS regression	Positive relationship between all studied variables and audit

		committee.	for 1995 and 2005.	fees in both years.
Piot (2001)	France	Whether ownership concentration related to higher audit quality (proxied with a triple distinction of auditor reputation: Big Six, national Majors and Local audit firms)	Multivariate logistic, and univariate analysis used for a sample 285 observation in year 1998.	Positive correlation between insider ownership and audit quality.
Table 4.2b: Summary of studies about role of different ownership types in other corporate aspects (for further highlight on role of these ownership types)				
Dechun Wang, 2005	US	Family ownership and earning quality (proxies for earnings quality: abnormal accruals, earnings informativeness, and persistence of transitory loss components in earnings).	4,195 firm-year observations that have proxy statements available in Lexis-Nexis from 1994 through 2002 for the 542 unique firms.	The empirical results show that, on average, founding family ownership is associated with higher earnings quality. In particular, I find consistent evidence that founding family ownership is associated with lower abnormal accruals, greater earnings informativeness.
Ben Nasr et al., 2015	Different countries	The impact of state and foreign ownership on earnings quality. The sample is 350 newly privatized firms from 45 countries.	350 newly privatized firms from 45 countries.	They documented a positive relationship between foreign shareholders and earnings quality (foreign ownership related to smaller abnormal accruals, higher earnings informativeness) and more persistent earnings. This

				result supports the argument that expects foreign owners require higher earnings quality to curb management expropriation.
Zeitun & Tian (2007)	Jordan	Impact of government ownership and financial performance (measured by return on assets (ROE))	59 publicly listed companies on the Amman Stock Exchange over the period 1989-2002.	Negatively correlation between government ownership and firm performance
Alnajjar (2015)	Jordan	Foreign ownership on financial performance (measured by ROA & ROE) in tourism firms.	A sample of 15 listed tourism firms and employing panel data model.	The finding showed no relationship between foreign ownership and financial performance.
Ding, Zhang and Zhang (2007)	China	Concentration ownership earning management.	273 Chinese companies listed in 2002. Cross-sectional multivariate regression. Both discretionary accruals and non-operating income/sales used as proxies for earning management.	Relationship between earnings management measures and ownership concentration exhibits an inverted U-shape pattern (earning management related to controlling owners till 55% ownership level).
Lim, How & Verhoeven (2014)	Malaysia	Concentration and identity of the largest shareholder matter to the timeliness of corporate earnings, measured by a stock price-based timeliness metric and the reporting lag	Panel data of 1276 Malaysian firms from 1996 to 2009	Main finding showed find a non-linear relationship between concentrated ownership, measured by the largest shareholding in a firm, and the reporting lag but not the timeliness of price

				discovery.
Jiang and Kim (2004)	Japan	Foreign ownership and information asymmetry	A sample over 18-year period from 1976 to 1994. Time series and cross-sectional models are employed to test timing and magnitude of intertemporal return-earnings associations as indication for information asymmetry.	Negative relationship between foreign ownership level and information asymmetry.
He, Donghui Li, Shenb, Zhang (2013)	Different countries	Foreign ownership and stock prices informativeness (measured by the probability of informed trading and price non-synchronicity).	The sample covers 3189 firms with foreign block ownership data in 40 markets in 2002. cross-sectional regression is used	The finding indicates that foreign owners contribute to the informativeness of stock prices.

CHAPTER FIVE: RESEARCH METHODOLOGY

This chapter starts by discussing the research philosophy and paradigms that commonly used in the business research and clarify where this research fits in these paradigms. The following part presents the methodology used to test the hypotheses for the first empirical model (secondary data model). The last part in the chapter covers the methodology used for the second model (questionnaire survey model).

5.1. Research philosophy

Following an appropriate scientific approach is important for researchers to obtain the truth about the subject under investigation (Sekaran and Bougie, 2013). There are two fundamental ways of thinking about research philosophy which are ontology and epistemology, and the difference between them affects the way in which researchers think about the research process (Saunders et al., 2007).

Ontology is concerned with the nature of reality (Saunders et al., 2007), so all scientific research is based on perceptions about what is around us, how does the world operate, and what can be possibly discovered by research (Sekaran and Bougie, 2013). Objectivism and subjectivism are two common perspectives of ontology, and both could result in valid knowledge.

Epistemology, on the other hand, is called the theory of knowledge as it is concerned with what constitutes valid knowledge. The essential question of epistemology is “can the approach to the study of the social world, including that of management and business, be the

same as the approach to studying the natural sciences? And the answer to that question points the way to the acceptability of the knowledge developed from the research process” (Saunders et al., 2007: 108). Positivism and interpretivism are the two common aspects of epistemology. Following is a brief discussion about these aspects alongside ontology’s aspects as the most important perspectives for business research.

Positivism is a philosophical position of research in dealing with the observation of social reality so the final research product can be law-like generalisations similar to those produced by natural scientists (Saunders *et al.*, 2007). From a positivist perspective, the world is governed by cause and effect laws that can be understood by employing a scientific approach of research (Sekaran and Bougie, 2013). The scientific approach given this perspective is seen as the means to obtain the truth (Sekaran and Bougie, 2013). Thus, the philosophy here is based on developing and testing research hypothesis based on propositions of a certain theory. Also, the researcher is assumed as entirely independent, value-free, and unbiased (Hussey and Hussey, 1997).

Contrary to Positivism view, Interpretivism is an epistemology that holds a view that the world around us is mentally constructed and it is, therefore, interested in understanding what is happening in people’s mind and/or how people create knowledge rather than searching for the objective truth (Sekaran and Bougie, 2013). The relevant research method for Interpretivism research is often qualitative, that enables the researcher to obtain a rich and more context-relevant data, for example via focus groups or interviews (Sekaran and Bougie, 2013). Generalizability is not deemed a priority from interpretivists point of view. Given the nature of the business environment which is continuously changing, interpretivists would argue that evidence from today’s research may not hold valid for next year which therefore makes generalizability less important.

Objectivism is an ontological stance proposes that social phenomena and their meanings exist independently/ external to social actors (Bryman and Bell, 2015, Saunders et al., 2007). Based on this view, entities are seen as social groups that have physical existence (objective reality). Subjectivism, on the another hand, assumes social phenomena and their meanings are not independent from social actors (Bryman and Bell, 2015). Saunders et al., (2007: 108) stated that subjectivist view “is that social phenomena are created from the perceptions and consequent actions of social actors. What is more, this is a continual process in that through the process of social interaction these social phenomena are in a constant state of revision”.

Moving forward, the extent to which researchers are clear about the theory when they start their research raises an important question concerning the design of the research (Saunders et al., 2007). This question is whether the research is deductive or inductive. The deductive approach means that the researcher develops hypotheses based on a specific theory and employs an appropriate methodology to examine the hypotheses (Saunders *et al.*, 2007). Saunders et al., (2007: 109) summarised a number of important characteristics for the deductive approach. First, this approach is concerned with causal relationships between variables e.g. whether a change of dependent variable is contingent to a change in independent variable(s). Second, the deductive approach controls to allow hypotheses testing which ensures that any change in the dependent variable is a function of the research independent variable by controlling effect of other potential variables.

Third, the deductive approach dictates that the researcher should be independent of what is being observed, i.e. have no direct intervention. For example a researcher only collects secondary data, or when the role of a researcher merely involves collecting primary data from self-administrated questionnaires, without having any direct intervention that may affect respondents' answers. Fourth, concepts involved in a study have to be employed in a way that

enables facts to be measured quantitatively. The final characteristic is generalisation, which requires selecting a sufficient sample size in order to generalise research outcome.

Inductive analysis is the second research approach. In this approach, the researcher collects data (usually through observations or interviews) and develops a theory as a result of data analysis i.e. a researcher observe phenomena and based on data analysis induces a theory (e.g. grounded theory) (Saunders et al., 2007, Sekaran and Bougie, 2013). Studies using this approach are likely to be more interested in the environment in which such events are taking place (Saunders *et al.*, 2007). Therefore, contrary to the deductive approach, in inductive approach the study of a small sample is more appropriate than a large one (Saunders et al., 2007). This also indicates that inductive research is less interested in generalisation. Table 5.1 presents the major differences between deductive and inductive approaches.

In summary, given the above discussion, this study employs a deductive approach. In the field of corporate governance and audit quality there is a wealth of literature that makes it more natural to draw hypotheses based on the available literature and theories (Creswell, 2013). Quantitative method is considered to be more relevant to this research as the objective is to empirically investigate the causal relationship among the research constructs. Hence, after a careful analysis of the literature, theory and contextual factors, hypotheses were deduced and translated into operational terms as presented in chapter four.

Table 5.1: Major differences between inductive and deductive research approaches

<i>Deduction emphasises</i>	<i>Induction emphasises</i>
<ul style="list-style-type: none"> • moving from theory to data • the need to explain causal relationships between variables • the collection of quantitative data • the application of controls to ensure validity of data • the operationalisation of concepts to ensure clarity of definition • a highly structured approach • researcher independence of what is being researched • the necessity to select samples of sufficient size in order to generalise conclusions 	<ul style="list-style-type: none"> • gaining an understanding of the meanings humans attach to events • a close understanding of the research context • the collection of qualitative data • a more flexible structure to permit changes of research emphasis as the research progresses • a realisation that the researcher is part of the research process • less concern with the need to generalise

Source: Saunders *et al.*, (2007: 120); Research Methods for Business Students, 4th edition.

5.2. Research paradigms

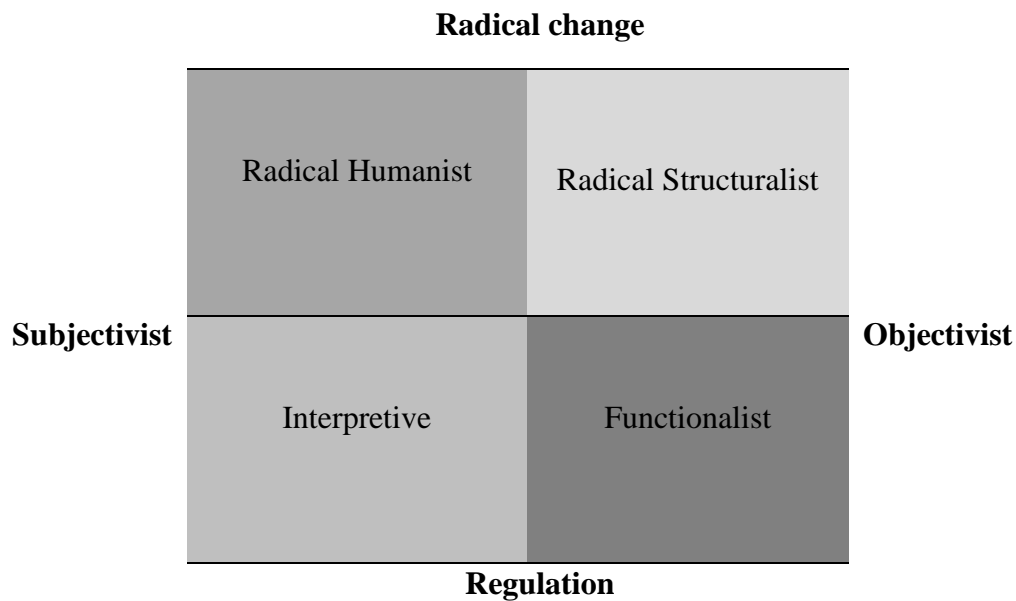
A paradigm is a term used in the social sciences which indicates the “way of examining social phenomena from which particular understandings of these phenomena can be gained and explanations attempted” (Saunders et al., 2007: 112). Bryman and Bell (2004) also defines paradigm as a way by which a research should be conducted and the results should be interpreted.

Burrell and Morgan (1979) indicates that the research paradigms aim at assisting researchers in “clarifying their assumptions about their view of the nature of science, offering a useful way of understanding the way in which other researchers approach their work; helping

researchers plot their own route through their research to understand where it is possible to go and where they are going” (cited in Saunders et al., 2007: 113).

Burrell and Morgan (1979) presented four research paradigms which are; radical humanist, radical structuralist, interpretive and functionalist. At the same time, there are also four conceptual dimensions which are arranged to be related to the four paradigms which are radical change, regulation, subjectivist and objectivist as presented in figure 5.1. Subjectivist and objectivist are the most common aspects of ontology as presented above. Radical change dimension relates to “a judgement about the way organisational affairs should be conducted and suggests ways in which these affairs may be conducted in order to make fundamental changes to the normal order of things” (Saunders et al., 2007: 112). Regulation dimension, on the other hand, is less judgemental than radical change. It is interested in how organisational affairs are managed and provides an improvement to the current situation (works within the existing framework) without doing a substantial change in the organisational affairs (Saunders et al., 2007).

Figure 5.1: Four paradigms for the analysis of social science



Source: Burrell and Morgan (1979:22). Sociological Paradigms and Organisational Analysis.

The functionalist paradigm is located on the objectivist and regulatory dimensions, and it is the most common paradigm that operates in business research (Saunders et al., 2007). Under this paradigm, researchers are more interested in a rational explanation of why a particular organisational event is happening and developing a set of recommendations to be adopted in the current situation (Saunders et al., 2007). Saunders et al., (2007) stated that the important proposition here is that organisations are assumed to be rational, in which rational explanations provide solutions to rational problems.

The interpretive paradigm is the epistemology philosophical position that holds a view that the world around us is mentally constructed and it is therefore interested in understanding what is happening in people’s mind rather than searching for the objective truth (Sekaran and Bougie, 2013). Unlike emphasizing rationality as functionalist paradigm assumes,

interpretive paradigm is more likely to be interested in discovering irrationalities (Saunders et al., 2007).

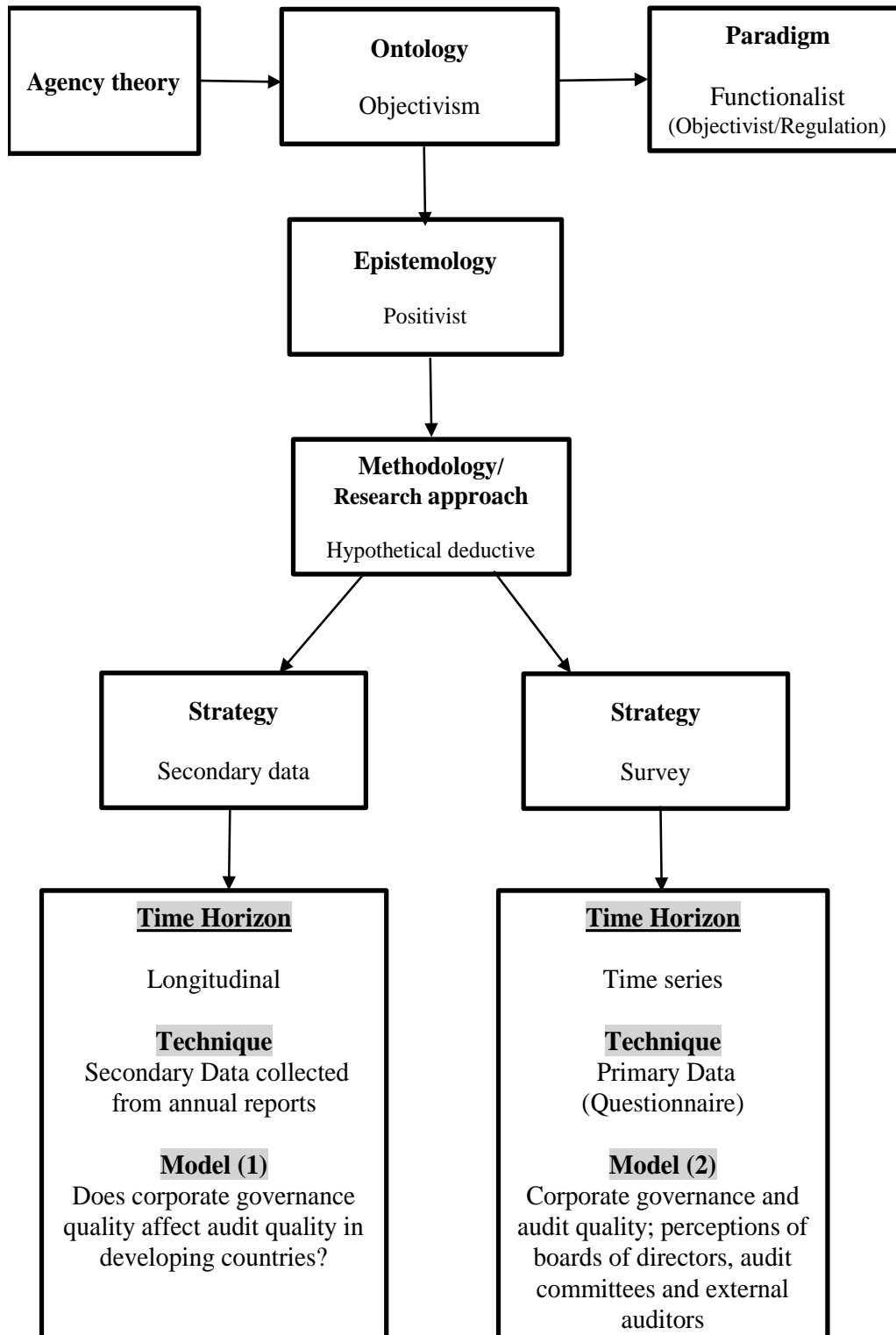
The radical humanist paradigm is stated within the subjectivist and radical change dimensions (Figure 5.1). As mentioned before, the radical change dimension adopts a substantial change on organisational structure. Thus, this paradigm concerned with radical change to the current organisational situation not just recommendations for improvement. Subjectivist perspective in research would be used for this paradigm (as well as for interpretive paradigm) as an ontological philosophy.

The final paradigm is radical structuralist which is attached with radical change and objectivist dimensions. Its view is to achieve radical change based on analysing organisational phenomena and at the same time “adopts an objectivist perspective because it is concerned with objective entities, unlike the radical humanist paradigm which attempts to understand the meanings of social phenomena from the subjective perspective of participating social actors” (Saunders et al., 2007: 113).

This study shows the research paradigms that are commonly used in business and management literature. After considering the previous research methods philosophies and taking into consideration the dominant paradigm followed in business studies, this research employs the positivism philosophy standpoint as the best relevant one to the researcher’s philosophical orientation. Hypotheses of the study were proposed based on agency theory in particular, and a causal relationships were introduced between variables. The researcher maintained independence particularly in the data collection process which help in producing objective quantitative data. Following this philosophy allows the results to be generalised

from the sample to the population (figure 5.2 below shows how this study fits within research philosophies and approaches).

Figure 5.2: Research philosophy and study models



Adapted from Iskander (2008): the relationship between auditing expectations gap and voluntary corporate disclosure: Egyptian evidence

5.3. Research methodology: first empirical model

The first section in this part provides description of the sample, the sources of data and justification of the time period during which the investigation was carried out. The chapter then outlines the definitions and measurements of the study variables (hypotheses and control variables). Third section is about descriptive statistics. Fourth section is about testing the correlations between the variables. Estimation methods, model specifications are discussed in section five.

5.3.1. Sample description

The population of the study is the listed non-financial companies in Amman Stock Exchange. The total listed non-financial firms in ASE at the end of 2014 are 177 firms (table 5.2). The financial companies are excluded because they are normally considered separately due to differences in their businesses and regulatory environment (Haniffa and Hudaib, 2006).

Furthermore, annual reports for 62 firms have missing data regarding audit committee characteristics in particular. These firms stated in their annual reports that they have audit committees (the hierarchy diagrams show the presence of audit committee as well), but they do not offer details of audit committee members which make it difficult to obtain the required information e.g. member independence or financial expertise).

Thus, as presented in table 5.2A, the final sample is 115 public non-financial firms (out of 177 or 65%)¹⁷. The size of final sample appropriately represents the population (table 5.2B) and therefore helps to generalize the findings of the study (it is consistent with the guidelines for sample size provided by Sekaran and Bougie (1992). The further detailed classification of the firms also shows that all industries' sub-sections are represented (table 5.2C).

Jordanian Code of Corporate Governance is published in 2008 by Jordan securities commission (JSC), and the public shareholding firms have been asked to adapt with this code starting from the beginning of 2009. Also, because of the data availability and because of the time frame for the research, the study is unable to include 2015 in the sample. Therefore, the study covers period from 2009 to 2014 inclusive. The data is manually collected through annual reports. Jordan Securities Commission's website and firms' websites are mainly used to download the annual reports¹⁸.

Table 5.2: Sample description

Panel A: Sample determination		<i>Numbers</i>
Listed non-financial companies in ASE as 31/12/2014		177
Missing data		(62)
Final sample		115
Panel B: Sectors in Jordan as classified by ASE		
	<i>Total population</i>	<i>Sample included</i>
- Financial sector	excluded	excluded
- Manufacturing sector	64	43
- Services sector	<u>113</u>	<u>72</u>
Total	177	115

¹⁷ The proportion of sample to total population was 60% in Zaman et al., (2011); 34% in Carcello et al., (2002); 29% in Goodwin and Stewart (2006).

¹⁸ The researcher contacted some firms via email and phone to obtain some missing data.

Panel C: Detailed classification of sectors	<i>Total population</i>	<i>Sample included</i>
<hr/>		
<u>Services sector</u>		
- Health care	4	3
- Education	6	4
- Hotel and tourism	11	8
- Transport	11	5
- Communication	1	1
- Media	2	1
- Utilities	3	2
- Commercial services	<u>75</u>	<u>48</u>
Total for service firms	113	72
<u>Industrial sector</u>		
- Pharmaceutical	6	6
- Chemical	10	7
- Paper and printing	4	2
- Food and beverage	10	7
- Tobacco	2	2
- Mining	14	10
- Engineering and construction	7	4
- Electric industries	5	3
- Textile and leather	<u>6</u>	<u>2</u>
Total for Industrial firms	64	43

5.3.2. Definition of variables

5.3.2.1 Dependent variable

The dependent variable for the study is audit quality which is measured using audit fees as a proxy. As discussed in the previous chapter, the audit fees level implies the quality of audit provided, *ceteris paribus*, either through greater audit effort (more hours) or through greater expertise of the auditor (higher billing rates) (Francis, 2004).

O'Sullivan (2000) used the amount of the audit fee as a proxy for audit quality. He argued that it is reasonable to assume that more audit investigation will require more audit hours and/or the use of more specialized audit staff, resulting in higher fees.

Prior studies acknowledge the link between audit quality and fees, and confirms that larger audit fees reflect high audit quality through greater audit effort (O'Sullivan, 2000; Carcello *et al.*, 2002; Abbott *et al.*, 2003; Caramanis and Lennox, 2008; Bliss, 2011; Zaman *et al.*, 2011). Audit fees level is correlated positively with more audit effort which influences the ability of the auditors to discover material misstatements (Lobo and Zhao, 2013), constrain earnings management (Blankley *et al.*, 2012), and increase accrual quality (Mande and Son, 2015).

The audit fees variable is transformed to natural log \ln_FEES to help in achieving normality of data, in order to prevent the largest firms from influencing the findings (Basiruddin, 2011). Data for this variable is obtained from annual reports as Jordanian public firms are mandated to disclose audit fees in their annual reports.

5.3.2.2. Explanatory variables

Board of directors' variables

The Jordan Corporate Governance Code (2008) prescribes a number of characteristics for the structure of boards of directors. Most important recommended attributes are addressed by this study as indicators of board effectiveness. First, JCGC (2008) emphasizes the importance board of directors' independence. The code recommends that one-third of directors at least should be independent in order to carry out effective monitoring away from management pressure. To do so, independent directors are expected to demand high quality audit to maintain shareholders' interests and to protect their reputation. Cohen et al., (2002) stated that the primary characteristic for board members in the agency perspective is their independence from management. This study measures the board independence variable as a percentage of independent members to board's total members. Due to varying board's size in different firms, considering an absolute number leads to biased results (Abbott et al., 2003). For example, the effect or power of five independent directors in a board containing ten members is not equivalent to the effect of five independent directors in a board containing only six members. This is also applicable for gender diversity, audit committee independence, and audit committee expertise. This is also applicable to gender diversity, audit committee independence and audit committee expertise proxies.

Second, JCGC (2008) recommends chair-CEO separation. Holding positions of chairman and CEO by the same person leads to conflict of interests as different tasks are assigned to each position. Jensen (1993) argues that it is necessary to separate the CEO and the chairperson positions for the board to ensure effective monitoring.

Third, Large board size has unclear effect; in one view, the large board size increases the board expertise and knowledge and leads to more monitoring effectiveness, (Adams and Mehran, 2011). In the opposite view, large board size results in less meaningful dialogue between its members, and more difficult to express their opinions (Lipton and Lorch, 1992), more communications problems (Bliss, 2011) and less effective in monitoring management (Jizi *et al.*, 2013). Therefore, due to these arguments, the study finds it better to keep the expected association with audit quality as neutral.

Fourth, more frequent meeting may indicate a more active board, and may be used as a proxy for the time directors have to monitor management (Vafeas, 1999). The number of board meetings may be used as an indication of the efforts exerted by directors, as well as an indication of their closer monitoring over management. Thus, the study expects that audit quality is positively associated with more diligent directors.

Finally, the existence of females in boards of directors improves the monitoring process, and leads to more effective board (Gul *et al.*, 2011, Adams and Ferreira 2009, Nielsen and Huse, 2010, and Terjesen *et al.*, 2009), improves earning quality (Srinidhi *et al.*, 2011), and reduces conflict levels (Nielsen and Huse, 2010). Moreover, women are generally considered more risk averse than men, and their decisions tends to be more conservative (Watson and McNaughton, 2007). Also, women are more sensitive to losses and they can give more of a risk management advantage over men (Schubert, 2006).

On the other hand, the existence of female in the board may have adverse effect. Adams & Ferreira (2009) argued that women as a directors in the board could negatively affect the firm value because the over monitoring probably leads to is counterproductive results. Thus, gender diversity not always beneficial for board effectiveness (Nielsen and Huse, 2010).

Given that the Jordanian is considered as a conservative community, the study expects that the existence of women in the board might make it more conservative and more risk averse, and in turn additional monitoring and will demand more audit quality

The representation of female directors in the sample is still small compared to other countries (4% of the total directors)¹⁹. Also, those women are not independent and they do not hold any executive positions in their firms. So, the variable of gender diversity (GEND) in represents non- executive and non-independent females. This study measures this variables using proportion of female members to total members.

Therefore, based on the above discussion and consistent with agency theory propositions, this study expects that more independent directors in the board (B_IND), the separation of Chair and CEO positions (RD), frequency of meetings (B_MEET), and gender diversity (GEND) lead to better monitoring and better audit quality. These variables are summarised in table 5.3, panel A.

Audit committee's variables

The Jordan Corporate Governance Code (2008) recommends a number of characteristics that effective audit committees should possess. First, the JCGC (2008) extends the notion of director independence to emphasise that audit committees should also be independent (at least two-third of committees' members). The rationale behind this is that an independent member is likely to be free from management's influence in ensuring that high-quality audit is employed and correct financial statements are presented to shareholders. This study

¹⁹ This ratio is consistent with representation of female directors in the whole population.

measures audit committees' independence as a percentage of independent members to total audit committee's members.

Second, audit committees' members should possess relevant financial experience. Financial expertise helps the committee members to understand and interpret the financial information correctly, as well as help them to effectively monitor external auditors. The JCGC (2008) recommends that audit committees should be composed of three members; one of them at least should have financial expertise. This study measures this variables using proportion of members who have financial experience to total members.

Third, JCGC (2008) mentioned that an audit committee is expected to offer strong monitoring, and therefore it recommends that the size should not be less than three members. Frequent audit committee meetings keep the committee abreast of any raised auditing issues, and therefore decrease the likelihood of reporting misstatement (Raghunandan, Rama and Scarbrough, 1998).

Fourth, it is consistent with the notion that the audit committees which meet more frequently allow directors more time to achieve their monitoring duties effectively (Karamanou and Vafeas, 2005). Moreover, large audit committee size is associated with less discretionary accruals (Ghosh et al., 2010), and less earning management (Yang and Krishnan, 2005). The JCGC (2008) recommends that audit committees should meet four times yearly at least.

In conclusion, the study expects, as stated in the following hypotheses, that more independent, expert, larger, and diligent audit committees provide better monitoring over management, and productive coordination with external auditors. So, the audit committee variables, as shown in table 5.3, panel B, are: audit committee independence (AC_IND), audit committee

financial expertise (AC_EXP), audit committee meetings (AC_MEET), and audit committee size (AC_SIZE).

Ownership identities' variables

Shareholders in Jordan can be categorised into four main types: families, foreigners (Arab and non-Arab foreigner investors), government and institutions (financial and non-financial institutions). The government ownership decreased after the privatization process, but is still available in a number of firms. Banks and other small institutions will be considered as institutional investors, because large institutional investors such as trust funds, venture capitalists, and hedge funds are not common in Jordan.

Lim, How and Verhoeven (2014) argued that the different types of shareholders have different investment policies and different degrees of incentives, and therefore their abilities to exert effective oversight might be different. So, it is expected that these different ownership types will demand different degrees of audit quality to protect firms and minority owners' wealth. Therefore, the ownership identities' variables are: family ownership (FAMILY_OWN), financial institution (INST_FIN), non-financial institutions (INST_NON_FIN) Arab-foreign ownership (FOR_ARB), Non-Arab investors (FOR_NON_ARB) and government ownership (GOV_OWN) — see table 5.3, panel C.

The study is interested to examine the effect of all levels of ownership. So, because Jordanian companies are mandated to disclose 5% and above ownership; the study will consider 5% as an ownership concentration threshold.

5.3.2.3 Control variables

The study takes into consideration different control variables which may have a potential effect on the dependent variable which are: company size (LNSIZE), business complexity (COX), leverage level (LEV), profitability (ROA), risk level (CURRTASSET), loss (LOSS), big4 audit firms (BIG4), non-audit service (NAS) and industry type (INDUSTRY). These control variables are well identified by prior research. The employed control variables model has been robust across different samples, different time periods, and different countries (Francis and Simon, 1987; Chan *et al.*, 1993; Yatim *et al.*, 2006; Zaman *et al.*, 2011).

Company size: Prior studies define corporate size as a main determinant of audit fees, and they suggest a number of theoretical explanations about the relationship between company size and audit quality measured by audit fees. First, large firms require more audit transactions and efforts due to their business volume (Simunic, 1980; Collier and Gregory, 1996; Naser and Nuseibeh, 2008). Second, large firm size makes the monitoring process by management/or owners more difficult, which consequently leads to a demand for more audit effort to compensate for the control loss (Abdel-Khalik, 1993). Third, large firm size increases the likelihood of wealth transfers, and thus, the need for undertaking monitoring increases (Chow, 1982).

The study measures size as the natural log of total assets. Considering assets as a proxy of firm size is consistent with Simunic (1980: 172) who pointed out that “assets seem more closely related to possible loss exposure than would an accounting flow measure, such as

revenue, because defective financial statements which result in a lawsuit frequently involve some deficiency in asset valuation”.

Complexity: firms that have more subsidiaries have more complex business transactions, and face more risks relative to other firms, and consequently experience higher audit fees (Hay *et al.*, 2008). Most Jordanian firms do not have subsidiaries. Anyway, for the firms which have subsidiaries, the study measures complexity as the number of subsidiaries, consistent with previous literature (O’Sullivan, 1999; Zaman *et al.*, 2011).

Leverage: the theoretical discussion in literature supports a positive association between level of debt and demand for external auditing (Chow, 1982). Chow (1982) and (Carey *et al.*, 2000) have argued that high debt levels in firms’ capital structures increases owners’ incentives to transfer wealth from the bondholder, and this in turn increases the demand for external auditing. Moreover, Abdel-khalik (1993) stated that more audit effort is required to meet the requirements placed on a firm by creditors. Therefore, positive association between leverage and audit fees is expected. Consistent with previous research, the study uses debt as a proportion of total assets as a measure of leverage.

Profitability: the study uses return on assets (ROA) as a proxy of firms’ profitability. It is measured by dividing company earnings at the end of financial year by its total assets. More audit effort is required for clients with bad financial outcomes, and conversely profitable firms are perceived as less risky (Pratt and Stice, 1994). So, the auditors assessment of risk is expected to be low, and therefore audit work will be less than higher risk client (a negative relationship is expected).

Risk: inventory and account receivables and inventory are more difficult to audit than other tangible assets (Simunic, 1980). Moreover, current assets are perceived as being more risky

to audit, resulting in higher audit effort and fees (Hay et al., 2008). The study uses the proportion of current assets to total assets as a measure of inherent risk.

Loss: A poorly performing firm is often perceived as being riskier and has weak internal control systems (Whisenant *et al.*, 2003; Hay *et al.*, 2008). Therefore auditors have to exert a greater audit effort due to increased risk (Rustnam *et al.*, 2013). Thus, positive correlation is expected. The variable is coded as 1 if the firm reported a loss in any of the last two years, and 0 otherwise.

Big 4: Zaman *et al.*, (2011) argued that firms with poor internal control are less likely to hire a big 4 auditor because they might be financially constrained and consider big 4 firms to be expensive. This suggests that big 4 firms (and big 4 affiliates) charge higher audit fees. The study uses a dummy variable to indicate a big 4 firm audit.

Non-audit fees: The term non-audit services (NAS) “means any professional services provided to an issuer by a registered public accounting firm, other than those provided to an issuer in connection with an audit or a review of the financial statements of an issuer” (Sarbanes, 2002: 747). The non-audit services include: bookkeeping services, design and implementation of the financial information systems, valuation services, actuarial services, internal audit outsourcing services, management and investment services, and legal services.

Under the SEC, it is unlawful for the public accounting firms to do any of those services contemporaneously with the audit service. However, the public accounting firms are allowed to engage in one or more NASs, excluding above services, in conjunction with the audit service in cases pre-approved by the audit committee of the auditee company and/or if the SEC see that this will be appropriate for the public interest and to protect the investors. The

audit committees are exempt from the preapproval process if the NAS fees are no more than 5% of total fees paid to the incumbent auditor in a financial year (SOX, 2002, section 201).

The provision of NAS has received considerable attention from regulators, auditors, investors, and academic researchers, especially after the corporate scandals that happened in recent years and the enactment of governance regulations as well. For example, audit fees and non-audit fees have been compulsory disclosed in UK annual reports since 1992 and since 2000 in the US (imposed by the Cadbury Report and the SEC, respectively). The extant research investigated mainly the consequences of providing NAS by the incumbent auditor, contemporaneously with the audit service, on the auditor's independence and the whole provided service quality.

Moreover, many researchers pointed out that providing NAS by the incumbent auditor increases the economic bond between auditors and their clients, and in turn negatively affect the auditor independence (Frankel *et al.*, 2002, Gul *et al.*, 2006, Chahine and Filatotchev, 2011, and Quick *et al.*, 2013; Causholli *et al.*, 2013). Moreover, the joint provision of NAS also increases the probability of earning management and discretionary accruals level (Frankel *et al.*, 2002), decreases the value relevance of earnings (Gul *et al.*, 2006), and in general decreases financial reporting quality (Habib, 2012).

From another side, the joint provision of NAS and the audit service has an advantage for organisations. Providing such services results in cost saving through "knowledge spillover" (Simunic, 1984; Antle *et al.*, 2006), and contractual nature effects (Arruñada, 1999). They argued that the knowledge spillover happened because the same set of information is used in achieving those type of services, and results in one service having a favourable effect on the other; for instance, an auditor who evaluates the internal control system, as part of his usual

duty, has a better knowledge to advise on or improve the internal control system than another service provider, and vice versa.

The contractual nature advantage “is connected with the fact that the exchange of professional services involves high transaction costs due to the informational asymmetry existing between supplier of and client for such services. Therefore, it becomes worthwhile to make use of the safeguards (brand-name, reputation, conduct rules, control systems among professionals, and client confidence) already developed when contracting and ensuring quality in auditing, thereby reducing the total cost of providing such services (Arruñada, 1999: 514).

Regarding the potential relation between audit fees and non-audit service fees, the academic literature ((Palmrose, 1986); (Simunic, 1984); (Ezzamel et al., 1996); Firth, 1997 and (Antle et al., 2006)) that empirically investigates this relationship showed mixed findings reported a positive association between audit fees and non-audit fees. Simunic (1984) argued that the audit fees of clients who also purchase NASs from incumbent auditors are significantly higher than the audit fees of clients who purchase those NASs from another provider. Moreover, Becker et al. (1998) indicated that non-audit services strengthen the economic bond between firms and auditors and therefore increases the audit fee taken from a client. Palmrose (1986) also documented a positive relationship between audit and non-audit fees.

On the other hand, the normal audit services may be used as a “loss-leader” in order to gain a higher profit margin on non-audit fees (Audousset-Coulier, 2015). So, auditors may discount auditing services in order to hold on to the profitable fees of non-audit services (Basiruddin, 2011), which therefore suggests a negative association between audit and non-audit fees.

Also, other studies found no evidence of an association between audit fees and non-audit fees especially after controlling for several factors expected to be associated with the demand for non-audit services (Firth, 2002; Whisenant *et al.*, 2003). They explained that the positive correlation between audit fees and non-audit fees (NAF) is due to specific events (e.g. mergers activated and issuing new shares) that create a demand for non-audit service and, at the same time, require more auditing. If these factors are controlled, together with client size, there is no association between audit fees and non-audit fees, and the results provide no relationship.

Based on the regulatory framework in Jordan, most common non-audit services are prohibited to be done by the same auditors who run the statutory audit work in order to maintain auditors' independence. According to the organising external audit profession (2006), it is not allowed for an external audit provider to offer contemporaneously any other services such as a bookkeeping service, liquidation consultations' service or design internal control system. However, some services are allowed, such as an IT service, or feasibility study service.

During the data collection process, it has been realised that only a few of the firms included in the sample received non-audit service from their incumbent auditors. These firms state in their annual reports that the external auditor also provides a consultation services for the firm, without any indication of the money paid for this services (Jordanian regulations do not mandate firms to disclose fees paid for non-audit services). Therefore, as the dominant literature supports "loss leader" view and documents negative relationship between audit fees and non-audit fees (Firth, 1997; Knechel *et al.*, 2012), this study expect the association to be negative. This variable is coded as 1 if the firm received non-audit service from the same auditor, and 0 otherwise.

Industry types: the complexity and business conditions are different between industries, and this might lead to different demand of audit effort. Controlling for industry type may help in identifying unobserved heterogeneity at the industry level (Klapper and Love, 2004). In Jordan, the market is relatively small and the main industries are financial, manufacturing and services (ASE, 2014). As financial industry is excluded from our sample, other two industries are considered as control/dummy variable.

The study use only main industry categories because many sub-categories (see table 5.2c) contain very few firms which make the estimates effect of these small sub-categories imprecise and the standard errors will be quite large. Further, the studies from Jordanian market (Matar and Noor, 2007; Al-Najjar, 2010; Hamdan *et al.*, 2013) used also the main industry categories.

Table 5.3: definition of the variables

Symbol	Variable name	Descriptions and measures	Expected sign
I: Dependent variables			
ln_FEES	Audit fees	Total amount paid to auditors as fees of statutory audit (converted to natural log).	
II: Independent variables			
<i>Panel A: Board of directors variables</i>			
B_IND	Board independence	Proportion of independent members to total members	+
RD	CEO-Duality	Dummy variable equal 1 if the chairman holds the CEO position, 0 otherwise	-
B_MEET	Board meetings	Frequency of board meetings during a year	+
B_SIZE	Board size	Number of board's members	+/-
GEND	Gender diversity	Proportion of female members to total members	+
<i>Panel B: Audit committee variables</i>			
AC_IND	Audit committee independence	Proportion of independent members to total members	+
AC_EXP	Audit committee expertise	Proportion of members who have financial expertise to total members.	+
AC_MEET	Audit committee meetings	Frequency of audit committee meetings during a year	+
AC_SIZE	Audit committee size	Number of audit committee's members	+
<i>Panel C: Ownership identities variables</i>			
FAMILY_OWEN	Family ownership	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by family.	+
INST_FIN	Financial Institutional ownership	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by financial institutions (banks).	+
INST_NON FIN	Non-Financial Institutional ownership	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-financial institutions.	+
FOR_ARB	Arab foreign ownership	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by Arab-foreign investors	+
FOR_NONARB	Non-Arab Foreign ownership	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-Arab foreign investors	+
GOV_OWEN	Government ownership	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by government.	+
III: Control variables			
LEV	Leverage	Debt as a percentage of total assets.	+
COX	Complexity	Number of subsidiaries	+
LOSS	Loss	Dummy variable equal 1 if a company reported loss in last two years, 0 otherwise.	+
RISK	Inherent risk	Percentage of current assets to total assets.	+

ROA	Profitability	Net profit as a percentage of total assets (indication of profitability).	-
BIG4	Big4 audit firms	Dummy variable equal 1 if the company audited by one of Big4 (Big 4 affiliates) audit firms, 0 otherwise.	+
LASIZE	Company size	Natural log for total assets	+
NAS	Non-audit service	Dummy variable equal 1 if the audit firm provides non-audit service jointly with the obligatory audit work, 0 otherwise.	-
INDUSTRY	Industry type	Dummy variable equal 1 if manufacturing firm and 0 if service firm.	

5.3.3. Estimation methods employed for data analysis

The data-set for this study is observations for different entities (115 Jordanian listed firms) over more than one year (six years from 2009 to 2014). Also, all firms have the same number of observations for each year (balanced) and have no missing values. Given this feature of the data-set, the panel approach in analysis is more appropriate²⁰. The panel data approach has a number of favourable characteristics. First, using panel data analysis plays important role in controlling variables which are not observed or measured across entities or variables that may change over the time period but not in a consistent manner (Wooldridge, 2010). It therefore enables time-invariant inter-firm heterogeneity (within firm) to be controlled. Studenmund (2000) stated that using panel data increases the sample size and helps in avoiding the omitted variables problem that may cause bias in a cross-sectional approach.

Second, by using the same cross-sectional units at different points in time, the panel approach provides a solution (control) of endogeneity problem (Hermalin and Weisbach, 2001;

²⁰ The panel approach assumes a difference between groups as well as over time (panel effect), whereas OLS assumes no significant differences across groups within the measurement data-set e.g. firms (i.e. no unique features of these groups).

Wooldridge, 2010). Panel data allows us “to obtain consistent estimators in a presence of omitted variables” under certain assumptions (Wooldridge, 2010: 281).

Third, panel data improves the efficiency of econometrics estimates (more accurate inference of model parameters), as it offers a large number of data points, increases the degrees of freedom and reduces the collinearity between explanatory variables (Hsiao, 2014).

Fourth, panel data can deal with different types of variables; for instance, variables which change between individuals but are the same over time such as gender or industry code; variables that change over time but are the same for all individuals in a given time period such as inflation rate or unemployment rate; variables that change between individuals as well as over time, such as audit fees, frequency of audit committee meetings or firms’ profitability; and variables which vary in predictable ways such as particular individual’s age (Studenmund, ,2000).

So, when a data-set is characterized as panel data, the most common estimated models are fixed effects and random effects models, particularly when the number of cross-sectional units is large, and the number of time periods is small (Kennedy, 2003). Therefore, these estimation methods are taken into consideration in this study, in addition to robust standard error as a common model in the absence of homoscedasticity.

5.3.3.1. Fixed effect model

The fixed effect model tests the relationship between explanatory and outcome variables within an entity (e.g. firm). Each entity has its own characteristics that may or may not affect

the explanatory variables (Torres-Reyna, 2011), so the fixed effects model embodies the panel effect by allowing the intercept to vary across entities (Al-Najjar, 2010).

The rationale of the fixed effect model is mainly based on two things as summarised by Torres-Reyna (2011). First, the fixed effect model assumes that something within the entity may influence the explanatory or dependent variables and the model will control them. The fixed effect model deletes the impact of the time-invariant characteristics from the explanatory variables, and then tests the predictors' net effect. Kohler and Kreuter (2005) and Torres-Reyna (2011) stated that the estimated coefficients produced by the fixed-effect model cannot be biased due to omitted time-invariant characteristics, because this model controls for all time-invariant differences between the individuals.

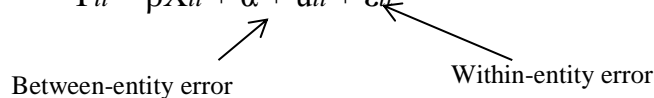
Second, the time-invariant characteristics are unique to the entity and should not be correlated with other entity's characteristics (Torres-Reyna, 2011). Each entity's error term and the constant should not be correlated with the others because each entity is different (Torres-Reyna, 2011). In case error terms are correlated then this model (fixed effect) will be no longer be suitable as its inferences may not be true, then alternative model(s) become more appropriate e.g. the random effect model.

However, the fixed effect method suffers from some problems. As the fixed-effect model is designed to study the variations within a group or entity; time-invariant variables stay stable, because they do not vary over time for each entity (Kohler and Kreuter, 2005; Torres-Reyna, 2011). Thus, the fixed effect model does not estimate coefficients of these independent variables that are constant across time (in this study for instance, Stata software under the fixed effect model drops (omits) industry and government ownership variables because they are constant over the study period). Also, under the fixed effect model, degrees of freedom

are a little low because for each cross-sectional observation, one degree of freedom is lost due to of the time demanding (Studenmund, 2000). In this study, with those two predictors omitted from the estimation of the fixed effect model, the predictors are decreased by two and therefore the model will report fewer degrees of freedom.

5.3.3.2. Random effect model

The rationale behind the random effects model is that the difference between groups is assumed to be random and uncorrelated with the predictor or explanatory variables that are included in the model (Torres-Reyna, 2011). (Greene, 2008: 183) stated that “...the crucial distinction between fixed and random effects is whether the unobserved individual effect embodies elements that are correlated with the regressors in the model, not whether these effects are stochastic or not”. Thus the random-effects model is a weighted combination of the between and within estimators, and takes the following form:

$$Y_{it} = \beta X_{it} + \alpha + u_{it} + \varepsilon_{it}$$


Between-entity error Within-entity error

Comparing to the fixed effect model, the random effect model estimates coefficients of independent variables that are time-invariant (i.e. constant over time, such as race or industry). In the fixed effects model these variables are absorbed by the intercept (Torres-Reyna, 2011). The random effect model also has more degrees of freedom as rather than estimating an intercept for each cross-sectional group in the measurement data-set, it estimates the parameters that describe the intercepts' distribution (Studenmund, 2000).

However, the random-effect model requires us to assume that the time-invariant omitted variable is uncorrelated with the explanatory variables in order to avoid omitted variable bias

(Studenmund, 2000). In addition, while the random-effect is fully efficient if it is more appropriate, its estimations become inconsistent if the fixed-effect model is appropriate, because then correlation between X_{it} and α_i^{21} implies correlation between the explanatory variables and the error (Colin and Trivedi, 2009).

A Hausman test is normally used to guide for more appropriate regression should be used—random-effects regression (GLS) or the fixed-effects regression test. It indicates that the random-effects regression is more appropriate as the result shows a rejection of the null hypothesis (H_0), because the chi-square value is insignificant (more than 5%), and the fixed effect model if chi-square value is significant. The outcome of the Hausman test (as presented later table 6.5) indicates that the coefficients of both models are not significantly different, which indicates that the random effect model is preferable. Accordingly, the random-effects regression is used as a main test and the fixed effect as a robustness (sensitivity) test.

In addition, when the Hausman test suggests the random effect model as a superior option, a Lagrange Multiplier test is used to check whether heterogeneity of entities is significant. If the outcome of this test is significant, this confirms the appropriateness of using panel model. However, if not, this means that no significant differences across entities (or firms), a simple OLS regression becomes applicable. Table 5.4 shows the outcome of a Lagrange Multiplier test which indicates that the random-effect model is very appropriate.

²¹ α_i is the unknown intercept for each entity (random individual-specific effects).

Table 5.4: Lagrange multiplier test for random effects		
$\ln_FEES (code,t) = Xb + u(code) + e(code,t)$		
	Var	sd = sqrt(Var)
ln_FEES	.4959604	.7042446
e	.0272538	.1650874
u	.1347377	.3670663
Test: $Var(u) = 0$		
chibar2(01) = 1032.00		
Prob > chibar2 = 0.0000		

5.3.3.3. Robust standard error model (Huber-White's sandwich estimator)

The results of a Breusch-Pagan/Cook-Weisberg test for heteroscedasticity shows an insignificant p-value of chi-square, thus indicating that heteroscedasticity (non-constant variance) is present. The visual check of the residuals plotted against fitted values also confirms the presence of heteroscedasticity.

As one of the common robust estimators, Huber-White's sandwich estimator is suggested to control and correct for the problem of heteroscedasticity and to give more reliable inferences when heteroscedasticity is present. As residuals variance (or variance of error term) is assumed to show homoscedasticity; heteroscedasticity is the absence of homoscedasticity of these residuals, and in turn the violation of this assumption causes standard errors to be

biased. Therefore, employing an appropriate estimation method e.g. Huber-White's sandwich estimator provides appropriate estimation (more reliable) even when the homoscedasticity assumption is violated.

5.3.4. Model specification

Assessing the level of audit quality is difficult *ex ante* because the amount of assurance provided by auditors is unobservable. The only observable outcome of the audit process is a generic template of the audit report which is in most cases standard clean opinions (Francis, 2004). Therefore, an important development in audit quality research is based on the premise that 'differences' in audit quality exist and can be inferred by the outcome of an adopted appropriate model (Francis, 2004).

The essential objective in selecting an audit quality model is its appropriateness for the research setting. Assessing model appropriateness should take into consideration whether the study examines the demand or supply of audit quality (DeFond and Zhang, 2014). They argue that when the study is interested in examining the demand of audit quality, the input-based models²² (e.g. audit fees, audit firm size) of audit quality are more appropriate, while if the objective is to study the supply side of audit quality, the output-based measures (e.g. conservatism, market reaction, restatement, and going concern opinions) become more appropriate.

Given that this study is interested to examine the role played by boards of directors, audit committees and ownership types in ensuring higher audit quality, this implies the demand

²² In which client choose audit quality based on the observable inputs (DeFond and Zhang, 2014).

side of audit quality. DeFond and Zhang (2014) categorised input-based models of audit quality into: auditor-specific characteristics such as auditor size (captured by Big *N* audit firms) and industry specialisation, and auditor–client contracting features such as audit fees. These models are presented below (NB: these audit quality measures are discussed more broadly in chapter four, section audit quality measurements).

Audit fees model: This model is based on the notion that higher audit fees are associated with higher audit quality. The theory predicts that higher audit effort increases the probability of detected errors (Shibano, 1990) and thereby higher audit quality. Therefore, a higher audit fee implies higher audit quality, *ceteris paribus*, either through more audit effort (more hours) or through greater expertise of the auditor (higher billing rates) (Francis, 2004). As audit effort is the dominant factor priced in audit fees (Mande and Son, 2015), this makes audit fees a reliable indicator of audit quality because higher fees indicate that the auditor worked more hours, signalling greater effort (Eshleman and Guo, 2014).

Examining the relationship between audit fees and audit effort is likely to aid the understanding of quality ((Johnson *et al.*, 2002; Srinidhi and Gul, 2007). It is reasonable to argue that when an auditor charges a premium fee to a client this will be associated with a better quality of assurance services provided (Palmrose, 1986). This is supported by Hribar, Kravet and Wilson (2014) who tried to develop a measure of accounting quality based on audit fees, and concluded that audit fees can be used to provide a reliable measure of a firm's accounting quality. Also, Increasing audit effort is a way auditors can respond to a heightened risk of financial reports misstatements and earnings management (Francis and Krishnan 1999; Eshleman and Guo, 2014; Blankley, Hurtt, and MacGregor, 2012).

The audit fees model is characterised by high consensus on its measurement, with low measurement error and capture quality variation for a large number of companies (Gul and Goodwin, 2010; DeFond and Zhang, 2014). Moreover, the audit fees model typically shows greater explanation power (well-specified model with R-square exceeding 70%), which decreases concerns about correlated omitted variables (Ghosh and Tang, 2015). On the other hand, results from the audit fees model are subject to alternative explanation(s). In some cases low audit fees might not reflect lower audit quality because the statutory audit service might be used as a “loss-leader” in order to gain a higher profit margin from non-audit services (Hillson and Kennelley, 1988). Also, audit fee levels may reflect the negotiation power between audit firms and their clients rather than audit quality (Asthana and Boone, 2012), or reflect litigation (and reputation) risk premium (DeFond and Zhang, 2014).

Size of audit firm: large auditors are expected to be more competent (large in-house expertise) and have strong incentives to provide high audit quality (DeAngelo, 1981). The advantage of this model is that it has been tested and supported by many prior studies and there is a strong assumption that it captures incentives and competences (DeFond and Zhang, 2014).

The greatest weaknesses for the audit firms is that they are typically measured dichotomously, which in turn fails to capture quality variation for a large number of firms, as the prior relevant studies suggest a similar level of audit quality exists in each category. In the case of Jordan, how can we differentiate the audit quality provided by non-Big-4 firms to 63% of non-financial firms from that provided by the Big-4 to 37% of these firms? Moreover, Arnett and Danos (1979), argued that as long as professional standards are maintained, it is unfair to arbitrarily differentiate between the large N auditors and other auditors.

In addition, in Jordan, Big-4 auditors are local affiliates of Big-4 international firms, except Deloitte. These audit firms may not have the same quality control standards as the Big-4. At the same time, there are local audit firms that comply with high audit quality standards, for instance Arab Professional Auditors, Abu Ghazaleh, Abbasi Co, and Ghosheh for auditing (JACPA, 2013). Also, given that Jordan is characterised by low litigation risk, this decreases the motivation of audit firms (Big-4 auditors in particular) to deliver high audit quality.

Auditors' industry specialisation: A specialist auditor is defined as a firm that has “differentiated itself from its competitors in terms of market share within a particular industry” (Neal and Riley 2004, p. 170). The industry specific knowledge is addressed by the literature as an indication of audit quality based on the rationale that the specialist auditors are more competent and have strong reputational incentives to deliver a credible audit. Also, the strong knowledge they have about the clients helps specialised auditors in making appropriate judgments, and is in turn translated to higher audit quality.

The advantage of this model is that it provides a measure of quality variation within Big-4 auditors. This is a benefit because this “finer partitioning” helps to address questions that are related to quality differences within audit firms (DeFond and Zhang, 2014). However, the major drawback is that this model suffers from lack of consensus on its measurement (auditor specialisation being normally measured by sales volume, market share, total fees received and number of clients) and therefore measure audit quality with a large measurement error (Neal and Riley, 2004; DeFond and Zhang, 2014). In addition to this general drawback, this model is less appropriate in a context like Jordan where the market is small and in which no particular auditor(s) dominates any specific industry (or industries) and nor do any of them have a large market share at a level that helps to make this audit firm industry experts. Thus,

the industry specialisation model seems to be not relevant to a small market like Jordan as it will give unreliable outcomes.

Ultimately, measuring audit quality is still a controversial task because there are different views as to what constitutes higher-quality audit. Though the Big-4 firms' model provides an indication about audit quality as reported by prior research, the audit fees model is preferable in a context like Jordan. The study follows prior high profile research, and considers the contextual situation by employing audit fees as a superior model to capture audit quality within the Jordanian environment (a broad discussion about audit quality measures is presented in chapter four, section audit quality and its measurement).

Moreover, all prior studies that examined the effects of corporate governance mechanisms; board of directors and audit committee in particular (O'Sullivan, 1999; Carcello et al., 2002; Abbott et al., 2003; Tsui et al., 2001; O'Sullivan, 2000; O'Sullivan and Diacon, 2002; Lee and Mande, 2005; Goodwin-Stewart and Kent, 2006; Yatim et al., 2006; Vafeas and Weagelein, 2007; Krishnan and Vivanathan, 2009; Bliss, 2011; Zaman et al., 2011; Rustam et al., 2013; Rainsbury et al., 2009; Collier and Gregory, 1996; Hay, Knechel and Ling, 2008) used the audit fees model to measure audit quality.

The audit fees model employed in this study also differs from the audit fees model that was employed by prior empirical studies. The common limitation of prior studies is that their models include few explanatory variables. Failure to consider all relevant explanatory variables may lead to inconsistent and/or ambiguous findings, as well as leading to exclusion bias (Dinga, 2011). Further, Niemi (2005: 305) stated "a significant omission in most fee models is controlling for ownership structure. If client ownership structure has an impact on audit production and fees, omitting it from the analyses of audit markets characterised by a

wide range of client ownership structures increases the risk of incorrect conclusions”. So, this study employs an augmented audit fees model which considers all measurable characteristics of boards of directors and audit committees, as well as all ownership types within the study context as explanatory variables.

In addition, some variables are included into our model for the first time, for instance Arab investors. Foreign investors and government investment are addressed only once as a dummy variable in a cross-sectional model by Niemi (2005) in the Finnish context. Gender diversity is also addressed once by Gul et al. (2012) in the US context. The majority of prior studies employed the cross-sectional audit fees model which may provide biased estimates of the relation between firm characteristics and audit fees because of the endogenous determination of firm characteristics and audit fees (Vafeas and Waagelein, 2007).

Therefore, because the subject-related literature (corporate governance in particular) has grown substantially since Simunic (1980) developed the first audit fees model (e.g. Ghosh and Tang, 2015; Abbott et al., 2003, Yatim et al., 2006, Zaman et al., 2011), this study accordingly adds other explanatory variables and therefore estimates the following augmented time series- cross sectional audit fee regression to reduce any omitted correlated variables concern. Thus, the model considers many proxies for corporate governance quality (i.e. a large set of the board of directors and audit committee characteristics, as well as different ownership identities).

Also, to avoid model misspecification, the model considers a set of variables to control for the cross-sectional variations in audit fees that were identified by prior research. The employed control variables model have been robust across different samples, different time periods and different countries (Francis and Simon, 1987; Yatim et al., 2006; Abbott et al.,

2003; Zaman et al., 2011). These control variables include client size, complexity, Big-4, leverage, profitability, risk, loss, non-audit service and industry types.

In summary, the study uses the following cross-sectional time series model as a basis of the analysis.

$$\begin{aligned} \ln_FEES_{it} = & \beta_0 + \beta_1 B_IND_{it} + \beta_2 RD_{it} + \beta_3 B_MEET_{it} + \beta_4 B_SIZE_{it} + \beta_5 GEND_{it} + \beta_6 \\ & AC_IND_{it} + \beta_7 AC_EXP_{it} + \beta_8 AC_MEET_{it} + \beta_9 AC_SIZE_{it} + \beta_{10} FAMILY_OWN_{it} + \beta_{11} \\ & NON_FIN_INS_{it} + \beta_{12} FIN_INST_{it} + \beta_{13} FOR_ARAB_{it} + \beta_{14} FOR_NON_ARAB_{it} + \beta_{15} GOV_{it} + \\ & \beta_{16} BIG4_{it} + \beta_{17} LN_SIZE_{it} + \beta_{18} COX_{it} + \beta_{19} LEV_{it} + \beta_{20} ROA_{it} + \beta_{21} LOSS_{it} + \\ & \beta_{22} NAS_{it} + \beta_{23} INDUSTRY_{it} + e \end{aligned}$$

Where

lnFEES	Total amount paid to auditors as fees of statutory audit (converted to natural log).
B_IND	Proportion of independent members to total members
RD	Dummy variable equal 1 if the chairman holds the CEO position, 0 otherwise
B_MEET	Frequency of board meetings during a year
B_SIZE	Number of board's members
GEND	Proportion of female members to total members
AC_IND	Proportion of independent members to total members
AC_EXP	Proportion of members who have financial expertise to total members.
AC_MEET	Frequency of audit committee meetings during a year
AC_SIZE	Number of audit committee's members
FAMILY_OWN	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by family.
INST_FIN	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by financial institutions (banks).
INST_NON FIN	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-financial institutions.
FOR_ARB	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by Arab-foreign investors
FOR_NONARB	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-Arab foreign investors
GOV_OWN	Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by government.
LEV	Debt as a percentage of total assets.
COX	Number of subsidiaries
LOSS	Dummy variable equal 1 if a company reported loss in last two years, 0 otherwise.
RISK	Percentage of current assets to total assets.
ROA	Net profit as a percentage of total assets (indication of profitability).
BIG4	Dummy variable equal 1 if the company audited by one of Big4 (Big 4 affiliates) audit firms, 0 otherwise.

LASIZE	Natural log for total assets
NAS	Dummy variable equal 1 if the audit firm provides non-audit service jointly with the obligatory audit work, 0 otherwise.
INDUSTRY	Dummy variable equal 1 if manufacturing firm and 0 if services firm

NB: The study did not use year dummy because of the analysis of differences shows no significant differences between the six years included. Also, the visual check of the descriptive figures confirms this. Furthermore, because of the model already includes dummy variables (e.g. Duality, Big4, Loss), adding more dummy variables may affect results of these included variables.

5.4. Research methodology: second model (questionnaire survey)

5.4.1. Introduction

This section presents the research methodology that is employed to address the research questions from perceptual viewpoints. Section two summarises the research objectives and questions. Section three discusses the research tool (questionnaire survey) and how it will be managed in terms of its design, content, piloting and validity assessment. Section four describes the sample selection and questionnaire distribution procedures. Section five is about a reliability test for the questionnaire which is essential before starting statistical analysis, and section six investigates statistical methods for the questionnaire analysis.

5.4.2. Study objectives

This section re-emphasises the objectives of this survey study. The main objectives of this study are, from perceptual viewpoints; first, elicit the opinions of relevant respondents in order to find out the perceived role of corporate governance mechanisms in ensuring credible audit quality. This, in conjunction with the secondary data model, offers further inferences

about the extent to which current corporate governance recommendations in Jordan affect audit quality. Secondly, to provides useful inputs for future governance reform by examining whether the importance of these governance mechanisms varies across the different groups. Thirdly, seek the views of relevant respondents regarding possible improvements in the current governance regulations.

5.4.3. Research tool and its specifications

5.4.3.1. Questionnaire survey

The questionnaire survey is effective as a research tool in measuring people's feelings or thoughts and it is associated with both positivistic and phenomenological methodology (Hussey and Hussey, 1997). Beattie and Fearnley (1998) concluded that the questionnaire as a survey instrument is able to examine both economic and behavioural factors, whereas secondary data analysis focuses only on economic factors. This type of research is scarce in Jordan and in similar contexts as well, so the opinions obtained from relevant respondents will pave the way and provide a building block for future research in this area.

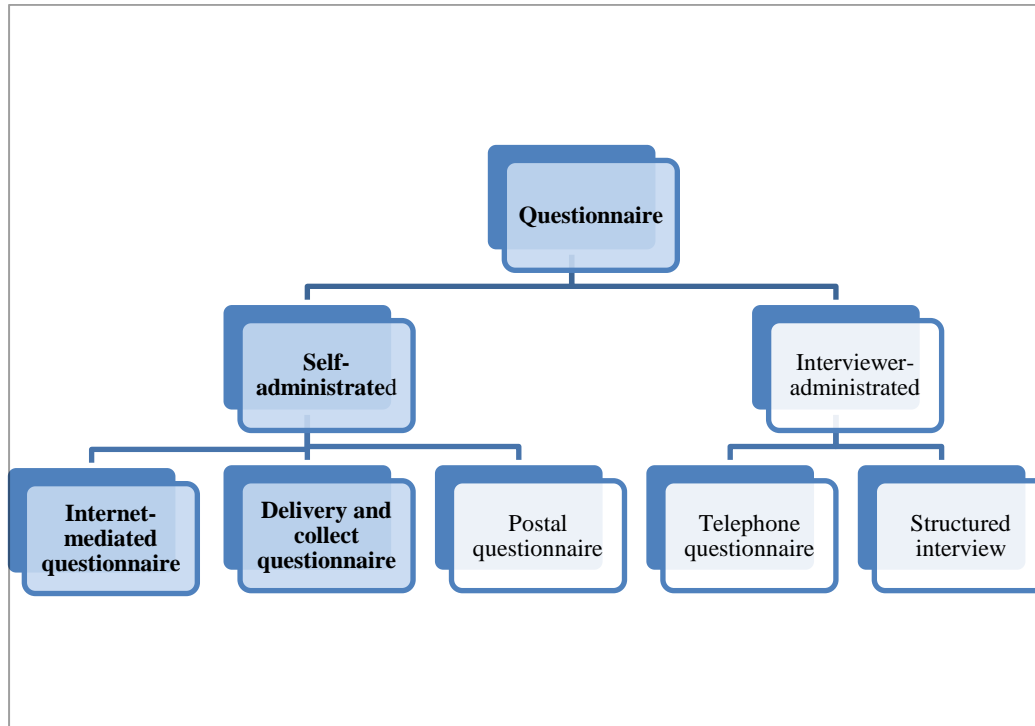
Designing a questionnaire varies based on how it is administered and, in particular, the number of targeted respondents (see Figure 5.3). There are two types of questionnaire; self-administrated and interview-administrated questionnaire. Although the interview-administrated questionnaires provides better quality and more deep answers, there is a serious concern surrounding the generalisability of the findings, based on the use of a small and unrepresentative number of samples (Saunders et al., 2007). Moreover, in a context like

Jordan, it is difficult to access to the boards of directors and audit committees because they are not always available in their companies, and also people there pay less attention to research and they may consider the interview as an investigation.

Self-administered questionnaires characterised by the ability to send it to different and dispersed places at the same time, suitable for large size of sample and therefore the ability to generalise the findings, and easy to code and analyse the collected responses. In this type the likelihood of contamination or distortion of consultation or respondent's answer is very low (Saunders et al., 2007).

Therefore, self-administered questionnaires is utilised in this study. This type of questionnaire is normally completed by the respondents, and it is carried out through three ways. It can be administered electronically using the Internet (Internet-mediated questionnaires) or an intranet (intranet-mediated questionnaires), personally distributed and collected (delivery and collection questionnaires) or posted to respondents who return them by post after completion (postal or mail questionnaires). So, given that there is no efficient post service in Jordan and post addresses are not available for all respondents, the study will use delivery and collection and Internet-mediated questionnaires (Qualtrics software is used for the internet-mediated questionnaires).

Figure 5.3: Types of questionnaire



Source: Saunders *et al.*, (2007: 357), Research Methods for Business Students, 4th edition.

Oppenheim (1992, p. 102) highlights that questionnaires have a considerable advantages over other survey methods. Using questionnaires is a relatively inexpensive data collection and processing method; it is possible to send them to respondents who live in dispersed geographical locations and all respondents can receive them simultaneously, thereby reducing potential influence from the timing of events, and finally questionnaires may avoid interviewer bias (Fink *et al.*, 2003). However, the questionnaire method can suffer from some drawbacks such as a low response rate, unsuitability for respondents with poor literacy or who have language difficulties, there is no opportunity to give explanations, and no opportunity to check on questionnaire completion (Oppenheim, 1992). The design and

administration of the questionnaire took these matters into consideration and carefully considered them. Poor literacy and language problems are viewed as insignificant since respondents are members of boards of directors, audit committees of listed companies and auditors who are well educated and well-informed on the subject under investigation.

5.4.3.2. Questionnaire design

Two types of questions, open and close-ended questions, have been used and the majority of them are close-ended questions. Close-ended questions offer a choice of answers in the form of a rating scale as this allows a numerical value to be given to an opinion, and be easy for respondents to answer and easy for the researcher to analyse (Hussey and Hussey, 1997).

Further, close-ended questions allow effective group comparison, which is useful to test specific hypotheses, and to save time for both researcher and respondents (Oppenheim, 1992, p. 115). Though closed-ended questions may suffer from loss of expressiveness and an absence of available places to reason the answer (Oppenheim, 1992), this study overcomes this issue by including open questions to give the respondents free space to answer spontaneously in each section. Also, a blank page is added at the end of the questionnaire for further comments.

Therefore, a five-point Likert Scale²³ is used in the questionnaire (Saunders *et al.*, 2000), utilising a scale of 1 signifying 'strongly disagree or least important', 2 for 'disagree or less important', 3 for 'no view or important', 4 for 'agree or more important', and 5 for 'strongly agree or most important'. The Likert Scale is useful in measuring opinions, beliefs, and attitudes as it shows varying degrees of agreement with, or endorsement of, a statement (Deville, 2003).

Moreover, the questionnaire survey is conducted in the Arabic language, so every respondent would understand the questions in the same fashion (the questionnaire has been translated back-to-back, i.e. translated into Arabic language and then back into English language to ensure that all questions convey the same meaning to all respondents).

A covering letter is added to the questionnaire explaining the nature and purpose of the study. In order to make respondents feel more comfortable, to encourage cooperation with the researcher and provide truthful information, a clear statement is added to the covering letter indicating the confidentiality of responses and the anonymity of respondents. Clear instructions are added at the end of the questionnaire explaining what the respondent should do with the completed questionnaire (for the delivery and collect questionnaire).

²³ All the relevant survey studies in this field used Five-point Likert Scale, so for the consistency purpose, the study employs the Likert scale containing five points. In addition, researchers advised that surveys should be developed in a manner that avoid complication and maintain simplicity to attract respondents, hence, the 5-point Likert scale was used because of its simplicity (Krosnick and Presser, 2010; Dillman, 1991).

5.4.3.3. Questionnaire content

This section shows the questionnaire content which is designed to elicit respondents' perceptions on corporate governance mechanisms and their effectiveness in improving audit quality.

The design of the measurement questions should be determined by the data you need to collect (Saunders *et al.*, 2009). Bourque and Clark (1992) pointed out that in designing a questionnaire, the included questions come from one of three resources (1) adopted questions used in other questionnaires; (2) adapted questions used in other questionnaires; or (3) self-developed questions. Adopting or adapting questions is also “more efficient than developing your own questions, provided that you can still collect the data you need to answer your research question(s) and to meet your objectives” (Saunders *et al.*, 2009: 368).

Given the study aims to examine the effectiveness of corporate governance practices in ensuring high audit quality in Jordan, the study adapted constructs (questions) from the Jordanian Corporate Governance Code (2008) particularly with respect to board of directors and audit committee. Furthermore, the study considered questions from previous relevant studies (Beasley *et al.*, 2009; Beattie *et al.*, 2012; Alghamdi, 2012; Stewart and Munro, 2007, Goodwin and Seow, 2002) and “adapted” these questions to be consistent with the study context and with the Jordanian governance code recommendations in particular. Further, the pilot study enhances the relevance/validity of the questions.

The questionnaire consists of five parts (appendix 1). Part one contains demographical information of the respondents (e.g. position, experience, gender and educational level). This type of information helps in explaining various perceptions among respondents.

Part two is about audit quality attributes (section one) and potential relevant proxies for audit quality in Jordan (section two). First, audit quality is commonly defined as the probability that an auditor will both detect and truthfully report material errors, misrepresentations, or any material breach in a client's accounting system (DeAngelo 1981; Catanach and Walker 1999). The probability of detecting such material breaches or misrepresentations depends on an auditor's ability (Deis and Giroux, 1992), while the probability of reporting these discovered breaches is a function of auditor independence (DeAngelo, 1981; Raghunandan and McHugh, 1994; Knechel *et al.*, 2012).

So in order to make sure of the extent that the respondents correctly understand audit quality concept, a question has been added presenting the two broad constructs for audit quality; these are ability (competence) and independence. The question in this part is asking about technical competence, audit work experience and technological proficiency as indications of an auditor's ability to detect material breaches. Auditor's technical competence and work experience are documented in literature as they enhance auditors' abilities, enhance their knowledge of financial statement errors, enhance their quality of judgement, and affect their cognitive representations (Libby and Frederick, 1990; Catanach and Walker, 1999; Francis, 2004; Knechel *et al.*, 2012; DeFond and Zhang, 2014). Auditor's technical competency reduces auditors' start up and learning costs, and may offer more structured audit techniques that enhance audit quality (Lys and Watts, 1994; Craswell *et al.*, 1995).

On the other hand, independence and objectivity are indications of the auditors' ability to report any material misstatement. They are unbiased attitude that enable auditors to achieve audit work and express an opinion not influenced by personal bias (Brenda and Jon, 2003) or management intervention. If auditors possess these attributes they are expected to deliver high audit quality.

The second section in this part aims to elicit the views of respondents about relevant proxies for audit quality in the Jordanian context. An important development in audit quality research is based on the premise that ‘differences’ in audit quality exist and can be measured by comparing different classes of auditors, their industry specialisation or level of audit fees (Francis, 2004). Therefore, as most commonly in the literature, DeFond and Zhang (2014) categorised audit quality models into auditor-specific characteristics such as auditor size and industry specialisation, and auditor–client contracting features such as audit fees. In the first model of this thesis audit fees have been used to capture audit quality in Jordan as the most appropriate audit quality indication in such a context. Thus, this question is to test respondents’ views about potential indicators of audit quality (Big 4 affiliates, firm size, and industry specialisation) in order to confirm the relevance of the audit fees proxy in Jordan, and also to see if the respondents come up with different answers.

Part Three represents the monitoring activities of the boards of directors and the extent to which these activities/attributes affect audit quality. In order to support results of the first model, a number of questions have been asked here about board independence, role duality, frequency of meetings, board size and gender diversity. Moreover, the questionnaire covers the importance of other important features of directors’ effectiveness in audit quality from perceptual viewpoints which cannot be measured through the available secondary data (not covered in the first model of this study).

The other boards of directors’ attributes includes roles of boards of directors in organising firms’ financial and accounting affairs, set disclosure policy and risk management policy to address the risks that the firm may face, obtaining relevant and timely information about the firm, monitoring and evaluating the executive management, and information and knowledge resources of the boards of directors.

Given the result of the secondary data model reveals a negative correlation between board size and audit quality and also between gender diversity and audit quality, the study has a motivation to obtain more understanding of this adverse correlation. This is by asking the respondents about their views regarding the potential consequences of having a large board size and having women in the board of directors. So the consequences of having a large board size may result in higher coordination cost (Jizi et al. 2013 and Jensen et al., 1993), more time for decision making, more communication problems (Bliss, 2011) and may less effective in monitoring management (Judge and Zeithmal, 1999). Moreover, the literature pointed out some behavioural aspects of women that may affect the board monitoring effectiveness, e.g. women are committed to the attendance of board meetings more than men (Gul et al., 2012), they are more conservative in their decisions than men (Watson and McNaughton, 2007), they ask for more audit work compared to men (Gul et al., 2012), and women on the board results in a higher level of conflict (Hambrick et al., 1996; Rose, 2007, Brunzell Eva Liljeblom, 2014).

Part four is about audit committees' monitoring activities and their perceived role on audit quality. In order to obtain more insight about the matter under study and support the first model inferences, a number of question have been asked here (questions about independence, size, meetings and experience). Other important dimensions for audit committee effectiveness cannot be measured through secondary data, so other questions go beyond these quantifiable characteristics and they will provide more insight and enrich our understanding about audit committee effectiveness and its role in audit quality.

The questions in this part includes the audit committee's activities in reviewing and approving significant accounting policies of the firm, internal control, risk management system and financial reporting, duties of the audit committee namely reviewing and approving the

appointment, reappointment and removal of the external auditor, reviewing the independence and objectivity of the external auditor, and reviewing and approving the audit fee and types and fees for non-audit services provided by external auditors. These statements are suggested by the Jordanian Corporate Governance Code (2008). Also their relationship with audit quality is supported by prior literature (Cadbury, 1992; DeZoort, 1997).

Moreover, it is important for audit committees to obtain credible timely information from management as well as appropriate monetary resources. The ability of audit committee members to carry out effective monitoring relies to a large extent on the quality of the information they receive (Bedard and Gendron, 2010), so this information should be of high quality, and on time (Sabia and Goodfellow, 2005). Another important type of resource is the monetary resource necessary, which is important for audit committees to pay any outside advisers, and to pay for their ordinary administrative expenses that are necessary or appropriate in carrying out their duties. Bedard and Gendron (2010) stated that audit committee effectiveness might be compromised when the committee is dependent on management's discretion to pay external advisors appointed by the committee, especially in the case where a potential conflict of interest with management is in place.

According to Sabia and Goodfellow (2005), while audit committee independence is an important attribute for an audit committee's effectiveness, this effectiveness will not be fully achieved without opening informal channels to share information and matters of concern to be discussed candidly. Recent qualitative research documented that great interaction takes place outside of formal meetings through informal communications with external auditors (Gendron and Bédard, 2006; Turley and Zaman, 2007; Beasley *et al.*, 2009). Also, Turley & Zaman (2004) pointed out that the interactive communication between external auditors and an audit committee may increase audit quality. Given this evidence and given that the Jordan

CGC (2008) emphasises the importance of such types of interaction; the study is interested to know the extent to which this interaction affects audit quality in the Jordanian context. Therefore,

Furthermore, Prior studies suggest that audit committee members who hold accounting and finance experience are likely to be more effective, and thus positively affect audit quality (Krishnan and Visvanathan, 2009). However, little is known about other knowledge/experience that might be important for audit committee effectiveness that could contribute to the integrity of financial reports. DeZoort and Salterio (2001) documented that different experience/knowledge bases of audit committee members leads to differences in their judgements and their relations with auditors. Therefore, other types of experience (experience in accounting, finance, external audit, internal audit, legal experience and business operation knowledge) have been added to the questionnaire to explore the potential effects of these different audit committee experiences in enhancing audit quality.

Part Five explores the respondents' opinions regarding the impact of the common ownership types in Jordan on audit quality. The respondents have been asked to mention their opinion for each ownership type (family ownership, financial institutions, non-financial institutions, government and foreign ownership). Given the paucity of relevant studies, the inferences obtained by the perceptions will confirm the findings of the first empirical model and consequently will help to obtain a deep understanding and a better explanation of the role played by different ownership identities in audit quality.

5.4.4. Pilot study and validity assessment

The rationale of the pilot study is to refine the questionnaire before sending it to the intended respondents so that respondents will have no problems in understanding or answering the questions (Saunders *et al.*, 2009; Fink, 2003). A pilot test also helps in obtaining some assessment of the questions' validity and the likely reliability of the data that will be collected (Saunders *et al.*, 2009). An initial run of the data collected by the pilot study provides an indication that the data collected will enable your research questions to be answered (Saunders *et al.*, 2009).

Bryman & Bell (2015) suggested that using the pilot study is important in finding out the time needed to complete the questionnaire; the clarity of instructions; which, if any, questions are unclear or vague; which, if any, questions the respondents feel are difficult to answer; whether in their opinion there are any major subject omissions; and whether there are any other comments.

For this study and in order to carry out the pilot test, copies of the questionnaire were circulated to a number of academic staff, a small sample of directors and a small sample of external auditors. The suggestions introduced by those respondents have been taken into consideration. The minimum number for a pilot test is ten questionnaires (Fink, 2003). An appropriate sample for the pilot study has been taken into consideration, so 16 questionnaires have been employed.

In this stage the internal validity of the questionnaire has been checked to ensure its ability to measure what is intended to be measured. The important point here is to check the validity of the "questionnaire's content" which means to what extent the questions in the questionnaire provide adequate coverage of the investigative questions (Saunders *et al.*, 2009). 'Adequate

coverage' can be assessed through careful definition of the research through the literature review, or alternatively to use a number of individuals to assess whether each question in the questionnaire is 'essential', 'useful but not essential', or 'not necessary' (Saunders *et al.*, 2009). In this study, the measurement questions have been carefully adapted from the literature and the Jordanian governance code, and also have been assessed by the individuals who will participate in the pilot study.

5.4.5. Administration of the questionnaire: Sample selection and distribution process

Given the difficulties in considering the whole population due to limited time and resources and accessibility, an important step in administering a questionnaire is to identify the sampling frame for the targeted participants. Therefore, the sample frame should be a complete list of all the cases in the population from which your sample will be drawn, as the sample frame also has implications regarding the extent to which you can generalise from your sample (Saunders *et al.*, 2009).

There are two types of samples; probability and non-probability samples. In probability samples "the chance, or probability, of each case being selected from the population is known and is usually equal for all cases. This means that it is possible to answer research questions and to achieve objectives that require you to estimate statistically the characteristics of the population from the sample. Consequently, probability sampling is often associated with survey and experimental research strategies" (Saunders *et al.*, 2009: 207). For non-probability samples, the probability of selected cases is unknown and therefore it is difficult to address

the research objectives effectively. It is possible to generalise the inferences from non-probability samples, but not on statistical grounds (Saunders *et al.*, 2009).

Probability sampling (or representative sampling) is the most common sampling approach correlated with survey-based research, where the target is to make inferences from a sample about a population to find answers to the research question(s) or to meet the study objectives (Saunders *et al.*, 2009). Saunders *et al.*, (2009: 208) summarised the following main steps to make sure that a well-representative sample has been obtained:

1. Identify a proper sampling frame based on the study objectives.
2. Choose a suitable sample size.
3. Select the most suitable sampling method and select the sample.
4. Check that the sample is representative of the population.

The study has taken these steps/requirements into consideration (as discussed below) in order to produce a valid questionnaire and in order to be able to generalise produced inferences.

As mentioned earlier, the participants are divided into three groups: members of boards of directors, members of audit committees and external auditors. Since these groups are a cornerstone of monitoring mechanisms, their perceptions could have remarkable implications for the purpose of the current research. The questionnaire survey has been developed to get an insight into the perceptions of these parties with respect to the effectiveness of internal corporate governance mechanisms and audit quality in Jordan.

The survey includes members of board of directors and audit committee members for 175 listed non-financial firms. Given the descriptive results of the first empirical study in the thesis, the average board size is eight members resulting in 1400 members as the directors' population. The audit committee members at the same time are directors and the average

audit committee size is three members. Therefore, the 1400 members have been split into directors who are members of audit committees and directors who are not. As a result, the population of audit committee members is 525 (175*3), and the population of directors who are not members of audit committees is 875 (1400-525) as presented in Table 5.5.

Nearly all the listed non-financial firms in Jordan (96%) are audited by ten audit firms. Based on the information obtained from the Jordan Association of Certified Public Accountants (JACPA), the average number certified auditors in these firms is five. So, the targeted population for external auditors is 50. The study considered all of the population because it is recommended to take all the population if its size is below 50 cases (Henry, 1990).

Regarding choosing a suitable sample size, the following formula (Yamane, 1967) has been used to determine the appropriate sample size.

$$n = \frac{N}{1 + N * (e)^2}$$

Where:

n is the sample size

N is the population size

e is the acceptable sampling error

95% confidence level and $p=.05$ is assumed

So, as presented in Table 5.5 below, the minimum sample size for directors is 267 (875/1+875*(.0025)); for audit committee members is 222 (525/1+525*(.0025)); and 44 for external auditors (50/1+50*(.0025)).

Table 5.5: structure of population and study sample

Groups	Population (<i>N</i>)	Sample size (<i>n</i>)
Directors in boards (not members of audit committee)	875	267
Audit committee members	525	222
External auditors	50	50 ²⁴

The study employed a random sampling method (which is one of the probability sample types) in order to choose the target sample size. So, a list of all directors has been prepared and 268 directors and 223 audit committee members have been randomly selected. After that, a directory is prepared, comprising a list of their details (for those who have been selected in the sample) e.g. firms they work in and contact details. The contact details, such as phone numbers (private or business numbers), faxes and email addresses, are sought from various sources e.g. the Amman Stock Exchange, the Securities Depository Centre, websites and personal relations.

The survey began by contacting the targeted respondents by email and telephone to obtain their consent to participate in the survey. For this contact, a number of points have been highlighted, for instance the identity of the researcher, the institution he belongs to, the study objectives and potential implications and benefits, confirming anonymity and encourage them to take part. Also, respondents were asked about the preferable method to send the

²⁴ Based on the sample size equation, the minimum sample size of auditors should be 44. However, the study will consider all of the population because it is recommended to consider all the population if its size is below 50 cases (Henry, 1990).

questionnaire through e.g. by hand, email, fax, or online survey (postal questionnaire is not an option because the post service in Jordan is inefficient enough/unreliable).

5.4.6. Reliability

A reliability test of the questionnaire is a statistical way to measure how reproducible the survey instrument's data are (Litwin, 1995). In other words, it represents to what extent the measurement data (items) included in the questionnaire are consistent. So this makes the reliability test important as a measuring instrument which verifies errors that lead to inconsistencies between observations, either through any one-measurement procedure or each time a given variable is measured by the same instrument (Deville, 2003).

One of the most common tests for measuring reliability is Cronbach's Alpha test. Cronbach's Alpha offers the best indication of the instruments' internal consistency as it has no right-wrong (binary) marking schemes, and then can be used for questions adopting scales such as the Likert Scale (Oppenheim, 1992). The results of Cronbach's Alpha test range between 0 and 1. A coefficient closer to 1 indicates better internal consistency of responses and therefore indicates that the research tool, e.g. the questionnaire, is a more reliable tool.

Therefore, the study used Cronbach's Alpha as a reliability (internal consistency) test because it is less biased and is a more reliable method. A coefficient level of 0.70 or more for Cronbach's Alpha test is an acceptable level of reliability (Nunnally and Bernstein, 1994). So, in this study, the coefficient is over 0.82 for all tests, indicating that the instrument is reliable and the data is suitable for the intended analysis.

5.4.7. Statistical methods for questionnaire analysis

Parametric and non-parametric tests are the common methods of data analysis for any scientific research. Though the parametric type of testing is more powerful; employing it is conditional on a number of assumptions (such as normality of distribution and linearity between variables) that should be met before conducting the analysis (Siegel, 1957; Gujarati, 2009; Hair, 2010).

Non-parametric tests remains an alternative statistical test as an appropriate statistical method used in analysing nominal or ordinal data (e.g. Likert Scale) regardless of the parametric-related assumptions (Siegel, 1957; Gujarati, 2003). Newbold et al., (2003) suggest that a non-parametric test is more relevant for the questionnaire survey because the data involved in the questionnaire is particularly nominal and ordinal data without the normality assumption. Moreover, Kolmogorov-Smirnov and Shapiro-Wilk tests have been used to analyse the normality and they showed that the data is not normally distributed (P value is less than 5%). As a result, non-parametric tests were used in this study.

Descriptive Statistics are used as a quantitative description of the main data characteristics. This comprises calculating frequencies, percentages, means for group responses and show level of agreement for each group. Kruskal-Wallis as the appropriate non-parametric test is used to examine the differences between respondents' perceptions (board of directors, audit committee members and external auditors). Kruskal-Wallis test provides an indication that

there is a significant differences between groups, but it doesn't show where the difference lies or between which groups. The study has employed Post hoc test after running Kruskal-Wallis to identify between which groups difference lies.

CHAPTER SIX: DATA ANALYSIS AND FINDINGS DISCUSSION- FIRST EMPIRICAL MODEL

6.1. Introduction

This chapter presents hypothesis testing for the first empirical model which is based on the secondary data. The data analysis and discussion are presented in the following order. Second section covers the descriptive statistics for the collected data. Third section shows both Pearson and Spearman rank correlations which are normally used to measures the strength of relationship between two variables i.e. correlation test. Fourth and fifth sections contains the result interpretation are discussion based on the different statistical estimation methods and finally the conclusion is section six.

6.2. Descriptive results

Tables 6.1.a and 6.1.b provide descriptive statistics for the variables employed in the study. Panel A reports those for continuous variables and panel B presents those for dichotomous variables. Of particular interest to the study are the corporate governance variables. The Jordanian corporate governance code 2008 require all public listed firms to have board of directors comprising three to thirteen members one-third of them should be independent, meet regularly at least six time a year, and chair and CEO position should be separated. Listed companies also should have audit committees comprising at least three members, two of whom should be independent, and one at least should have financial expertise.

Table 6.1 present some important descriptive statistics (mean, standard deviation, minimum and maximum, skewness, and kurtosis) of dependent variable (audit fees *ln_AFEE*), the hypothesis variables (board independence *B_IND*, role duality *RD*, board meetings *B_MEET*, board size *B_SIZE*, gender diversity in the board *GEND*, audit committee independence *AC_IND*, audit committee financial expertise *AC_EXP*, audit committee meetings during a year *AC_MEET*, audit committee size *AC_SIZE*, proportion of o shares held by family *FAMILY_OWN*; proportion of o shares held by non-financial institutions *NON_FIN_INS*; proportion of o shares held by financial institutions (banks) *FIN_INS*; proportion of o shares held by government *GOV*; proportion of o shares held by foreign Arab investors *FOR-ARB*; *FOR-ARB*; proportion of o shares held by non-Arab foreigners *FOR_NON_ARB*. Descriptive statistics for control variables also presented. The following is a show of important descriptive statistic results.

For board of director characteristics, the average board size is just above eight members. So, Firms in Jordan have relatively modest board sizes, given that board of directors in Jordan is comprised of an odd number of members, minimum three, and maximum thirteen. Given that the optimal board size is depends on firms' characteristics, different argument are mentioned. The average of board size in Jordan is similar to what was reported in Malaysia which is 8 members (Hannifa and Hudaib, 2006), and less that the size in US which is 11.3 members in averages (Laksmana, 2007). Also, more than half of directors are independent; the average proportion of independent directors on boards is 51 per cent. This ration is higher than some developing countries like Malaysia where ratio of independent is 44% (Bin-Muhamed, 2013). Therefore, the board in study sample adheres with code recommendation regarding independent existence of independent directors.

The average frequency of board meetings is 7.3 times a year which is close to the minimum limit determined by the regulations which is 6 times a year. So, there is an obvious gap between the minimum numbers of meetings, which are 4 times a year and the maximum number of meeting, which is 23 times a year. this indicates that board in Jordan meets less frequently than their counterparts in the UK where the average board meetings is 8.78 times a year (Zaman *et al.*, 2011), as well as quite similar to Malaysia where average board meetings reported by Bin-muhamed (2013) is 7.73 times per year.

Role duality is still common in Jordanian companies but the ratio was decreased from 25 per cent in 2009 to 20 per cent in 2014, which this likely due to the encouragement by regulations towards separation between board chair and CEO position. Though the position of chairman & CEO is separated in the majority of Jordanian companies, this ratio of role duality is still high comparing to other contexts, for instance it is 12% in Australia (Bliss, 2011); 7% in the UK (Zaman *et al.*, 2011); 13% in Malaysia (Bin-Muhamed, 2013).

With regard to audit committee's variables, the average of audit committee size AC_SIZE is three members, which complied with the JCGC (2008) that requires audit committee to contain at least three members. The maximum number of committee members is five, and also the result indicates that most of committees have only three members.

The average frequency of audit committee meetings during a year is 3.8 times. About two third (64 per cent) of audit committee members are independent with an average of 59 per cent of them having financial expertise. Accordingly, these descriptive results indicate that the Jordanian companies on average comply with the governance code and its recommendations with respect of formation and characteristics of board of directors and audit committee. However, the role duality is still common in Jordan with (in about 23% of the listed companies).

The result of ownership identities show that family ownership, financial institutions, non-financial institution, foreign Arab-ownership, foreign-non-Arab ownership are common in Jordan by percentages 12%, 9%, 17%, 8% and 4% respectively. These figures are in line with previous results (Jafar and Alshawwa, 2009, Omran *et al.*, 2008 and Zeitoun & Tian, 2007). Foreign investment (which was 11% in total; Arab is 8% and non-Arab 3.5%) are stable (slightly changed) over 2009 and 2014 as ASE obtained more advantage as a stable market in a stable state. The government ownership is also stable as its investments are in some important firms (e.g. Phosphate, Potash, Alrai Press) for strategic reasons.

As shown, skewness and kurtosis indicated some problem with the normality assumption for some variables and the data has been transformed accordingly using natural logarithm to get the best fit. Number of variables have been transformed (e.g. *LN_AFEE*, *LN_ASSET*) using the natural log. Rahman and Ali (2006) reported that data is considered to be normal if the standard skewness is within ± 1.96 and standard kurtosis is ± 2 . Other researchers consider data to be normal if the standard Kurtosis within ± 3 (Gujarati, 2003; Haniffa and Hudaib, 2006).

Table 6.1.a: descriptive statistics for continuous variables (n= 690)																					
YEAR	Desc. Stat.	Ln_FE ES	B_IND	B_MEE T	B_SIZE	GEN D	AC_IN D	AC_EX P	AC_MEE T	AC_SIZE	NON- FIN. INS	FIN_IN S	FAMIL Y	GOV	FOR _	FOR_NO N_ARB	SIZE (000)	Lev	COX	risk	ROA
2009	Mean	13660	0.50	7.06	8.38	0.03	.646	.592	3.66	3.09	.189	.08	.107	.007	.074	.034	68147	.06	1.26	.45	.019
	Min	1865	0.00	5.00	3.00	0.00	0.00	0.00	2.00	3.00	0	0	0	0	0	0	2448	0	0	.004	-.42
	Max	110900	.91	13.0	13.0	0.29	1.00	1.00	7.0	4.00	.736	.95	.9	.27	.86	.89	885699	.77	16	.99	.803
	SD	16461	0.21	1.71	2.05	0.07	.293	.24	.79	0.29	.21	.16	.178	.04	.148	.12	127925	.13	2.7	.27	.12
	Skewness	3.5	-0.51	1.74	.364	2.20	-0.53	-.14	.99	2.74	.85	2.6	1.8	5.7	2.6	4	4	3	3	.14	1.6
	Kurtosis	17	2.80	5.33	2.90	7.40	2.57	2.74	5.95	8.56	2.6	10	6.5	34	10	24	20	15	14	1.8	16
2010	Mean	13944	0.52	7.02	8.38	.034	0.64	0.59	3.8	3.10	.18	.08	.11	.007	.07	.035	69368	.07	1.3	.44	.007
	Min	2000	0.00	6.00	3.00	0.00	0.00	0.00	2	3.00	0	0	0	0	0	0	2142	0	0	.004	-.507
	Max	116904	0.90	14.0	13.0	0.42	1.00	1.00	7	4.00	.75	.95	.9	.27	.86	.89	1008039	.72	16	.99	.38
	SD	17303	0.20	1.63	2.04	0.07	0.29	0.24	.76	0.30	.2	.16	.18	.04	.14	.12	145718	.13	2.7	.27	.12
	Skewness	3.6	-0.57	1.94	.32	2.64	-0.56	-.19	.83	2.58	.9	2.5	1.8	5.7	2.7	4	4	2.7	3	.13	-1.2
	Kurtosis	17	2.92	6.73	2.8	11	2.62	2.83	6	7.70	2.7	10	6	34	11.4	24	24	12	14	1.9	8
2011	Mean	14262	.50	7.2	8.2	.033	.63	.59	3.88	3	.17	.09	.12	.007	.08	.033	77944	.07	1.39	.42	.002
	Min	2000	0	6	5	0	0	0	0	3	0	0	0	0	0	0	1917	0	0	.003	-.3
	Max	131818	.91	19	13	.40	1	1	17	4	.93	.95	.9	.27	.86	.89	1302160	.61	21	.97	.31
	SD	18211	.20	2.35	2	.07	.29	.24	1.46	.31	.2	.16	.19	.04	.15	.13	193043	.12	3	.27	.09
	Skewness	3.9	-.42	2.92	.38	2.5	-.43	-.17	6.25	2.5	1.3	2.6	1.7	5.7	2.5	4.7	5	2	3.6	.21	.18
	Kurtosis	20	2.75	12.4	2.65	9.9	2.4	2.83	58	7.6	4.2	11	5	34	10	27	29	9	19	1.9	4.7
2012	Mean	14620	.51	7.49	8.26	.033	.63	.58	3.9	3	.17	.09	.12	.007	.08	.035	80007	.08	1.3	.43	.005
	Min	2000	0	4	5	0	0	0	1	3	0	0	0	0	0	0	1920	0	0	.003	-.46
	Max	119818	.91	23	13	.4	1	1	8	5	.94	.95	.9	.27	.86	.89	1534884	.61	21	.96	.29
	SD	17013	.19	2.62	2.10	.07	.29	.24	.91	.38	.21	.16	.19	.04	.16	.13	200483	.12	3	.27	.10
	Skewness	3.8	-.34	2.81	.38	2.5	-.35	-.12	1.2	3	1.3	2.5	1.6	5.7	2	4.7	5	2.3	3.7	.17	-1.2
	Kurtosis	19	2.78	13.7	2.63	9.9	2.3	2.8	9.9	12	4.4	10	5	34	9	26	33	8	20	1.9	8.4
2013	Mean	15178.	.51	7.5	8.1	.029	.64	.59	3.82	3.11	.15	.09	.12	.007	.087	.035	85788	.08	1.36	.41	.015
	Min	1392	0	6	5	0	0	0	0	3	0	0	0	0	0	0	1887	0	0	-.19	-.27
	Max	128818	1	20	13	.4	1	1	9	5	.96	.95	.9	.27	.86	.89	1798635	.67	20	.96	.28
	SD	17874	.21	2.6	2	.07	.29	.24	1.09	.34	.21	.16	.2	.04	.16	.13	225092	.13	2	.28	.07
	Skewness	3.7	-.47	2.5	.47	2.8	-.4	-.14	2	3	1.6	2.5	1.6	5.7	2	4.7	6	2	3.6	.175	.066
	Kurtosis	19	2.9	10	2.7	11	2.3	2.8	12.9	12.2	5	10	5	34	9	26	37	9	19	1.9	6.5
2014	Mean	15351	.52	7.7	8	.027	.65	.59	3.8	3	.16	.09	.12	.007	.084	.035	84961	.07	1.3	.43	.01
	Min	1392	0	4	5	0	0	0	0	3	0	0	0	0	0	0	1692	0	0	-.29	-.35
	Max	142297	1	18	13	.4	1	1	10	5	.96	.95	.9	.27	.86	.89	1765784	.95	20	.97	.31
	SD	18519	.21	2.8	2	.06	.29	.24	1	.34	.21	.16	.2	.04	.15	.13	223219	.14	2.9	.293	.08
	Skewness	4	-.43	1.9	.50	2.9	-.42	-.11	2	3	1.4	2.5	1.6	5.7	2.5	4.7	5	3.4	3.6	.15	-.2
	Kurtosis	23	2.9	6.2	2.7	12	2.3	2.7	14	12	4.7	10.6	4.9	34	9.8	26	35	18	19	2	6.9

Total	Mean	14413	.51	7.3	8.2	.03	.64	.59	3.8	3.11	.17	.09	.12	.007	.08	.035	77702	.07	1.3	.43	.01
	Min	1392	0	4	3	0	0	0	0	3	0	0	0	0	0	0	1692	0	0	-.29	-.50
	Max	142297	1	23	13	.42	1	1	17	5	.96	.95	.9	.27	.86	.89	1798635	.95	21	.99	.80
	SD	17525	.2	2.3	2	.07	.29	.24	1	.33	.21	.16	.19	.04	.156	.13	188976	.13	2.9	.27	.10
	Skewness	3.8	-.45	2.6	.4	2.6	-.45	-.14	3.9	2.9	1.2	2.5	1.7	5.7	2.5	4.6	5	2.8	3.5	.16	-.06
	Kurtosis	20	2.8	11	2.7	10.4	2.4	2.7	44	11	4	10.7	5	34	9.8	26	38	12	18	1.94	12

Ln_FEES: audit fees; B_IND: percentage of board members who are independent based on JCCG definition; B_MEET: frequency of board meetings during a year; B_SIZE: board size; GEND: percentage of female in the board; AC_IND: percentage of independent member in audit committee; AC_EXP: percentage of AC members who have financial expertise; AC_MEET: frequency of AC meetings; AC_SIZE: audit committee size; FAMILY_OWN: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by family; NON_FIN_INS: Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-financial institutions; FIN_INS: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by financial institutions (banks); GOV: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by government; FOR-ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by foreign Arab investors; FOR_NON_ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-Arab foreigners; LEV: leverage; COX: number of subsidiaries; risk: percentage of current asset from total asset; ROA: return on asset; SIZE: firm total asset.

Table 6.1.b: descriptive statistics for dichotomous variables ($n= 690$)

		RD	Loss	Big-4	Industry(manufacturing)	NAS
2009	Yes	29	43	40	42	12
	Percent	.25	.37	.347	.365	.104
	No	86	72	75	73	103
	Percent	.75	.63	.653	.635	.896
2010	Yes	29	53	42	42	12
	Percent	.25	.46	.365	.365	.104
	No	86	62	73	73	103
	Percent	.75	.54	.635	.635	.896
2011	Yes	28	51	44	42	11
	Percent	.24	.44	.38	.365	.095
	No	87	64	71	73	104
	Percent	.76	.56	.62	.635	.905
2012	Yes	24	64	44	42	12
	Percent	.21	.56	.38	.365	.104
	No	91	51	71	73	103
	Percent	.79	.44	.62	.635	.896
2013	Yes	25	60	43	42	12
	Percent	.22	.52	.37	.365	.104
	No	90	55	72	73	103
	Percent	.78	.48	.63	.635	.896
2014	Yes	23	47	45	42	12
	Percent	.20	.41	.39	.365	.104
	No	92	68	70	73	103
	Percent	.80	.59	.61	.635	.896
All	Yes	26	53	43	42	12
	Percent	.23	.46	.37	.365	.102
	No	89	62	72	73	103
	Percent	.77	.54	.63	.635	.898

RD: 1 if there was role duality, 0 otherwise; LOSS: loss in last two years 1, 0 otherwise; BIG4: 1 if audited by big4 (affiliates), 0 otherwise; INDUSTRY: 1 if manufacturing, 0 if services; NAS: 1 if the audit firm also provide non-audit service, 0 otherwise.

6.3. Correlation analysis

This section presents both Pearson and Spearman rank correlations which are normally used to measure the strength of relationship between two variables and ranges from +1 to -1, where a correlation of ± 1 indicates a perfect linear relationship between the variables. The threshold of harmful multicollinearity is ± 0.80 , and at this level the regression analysis²⁵ may be adversely affected (Gujarati, 2003). As a result of the non-parametric nature of our data, a Spearman collinearity test is used (Table 6.2) to test for multi-collinearity among the study variables. Also, Pearson collinearity test (Table 6.3), which is usually used to check parametric data, is used to confirm Spearman test results.

Outcomes from two correlation matrices are quite similar. As a result, the presented correlation tables do not show collinearity threat to the interpretation of regression coefficients of the study variables. However, from the Pearson correlation, the highest coefficient is reported between company's size and audit fee (0.66) which is expected because the size is the dominant determinant of audit fees (Simunic, 1980, Zaman et al., 2011). To overcome any potential problem in the regression, the study deals with this matter, later in the regression section, by scaling audit fees according to firm size in order to linearize the relation between fees and firms' size, and to reduce heterogeneity of variance due to size.

Furthermore, the correlation between board independence ratio B_IND and audit committee independence ratio AC_IND is high (0.72), this correlation is also expected because audit committee members - at the same time - are part of board members. Other high correlations are between firm size (ln_SIZE) and board size (BSIZE) 0.43, and relatively higher between

²⁵ Hair *et al.*, (2009) are considered ± 0.90 as a multicollinearity threshold.

firm size (\ln_SIZE) and ($BIG4$) 0.33. This correlation is justified as large companies normally have large boards (Coles *et al.*, 2008), as well as audited by big audit firms $BIG4$.

Finally, in order to make a robust check for multicollinearity in the model, an evaluation of variance inflation factor (VIF) was carried out (table 6.4) to check for the degree of multicollinearity. The VIF and tolerance levels ($1/VIF$) show that all values are within acceptable level suggesting no multicollinearity problem (Gujarati, 2003; Hair *et al.*).

Table 6.2: Spearman correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
(1) ln_FEES	1.0																								
(2) B_IND	0.085	1.00																							
(3) RD	-0.197	0.048	1.00																						
(4) B_MEET	0.176	0.129	-0.140	1.00																					
(5) B_SIZE	0.344	0.143	-0.035	0.107	1.00																				
(6) GEND	-0.182	-0.117	0.059	0.006	-0.035	1.00																			
(7) AC_IND	0.193	0.729	-0.019	0.166	0.308	-0.150	1.00																		
(8) AC_EXP	0.242	0.059	-0.033	0.032	0.152	-0.122	0.175	1.00																	
(9) AC_MEET	0.141	0.065	-0.114	0.174	0.218	0.033	0.144	-0.042	1.00																
(10) AC_SIZE	0.246	-0.015	0.023	0.057	0.319	0.049	-0.113	-0.134	0.106	1.00															
(11) FAMILY	-0.173	-0.087	0.108	-0.114	-0.030	-0.022	-0.009	-0.079	-0.034	-0.096	1.00														
(12) INST_FIN	0.060	-0.086	-0.068	0.113	0.063	0.059	-0.050	0.096	0.080	0.062	-0.193	1.00													
(13) NON_FIN_INS	-0.003	-0.130	-0.044	0.027	-0.033	0.100	0.012	0.146	0.003	-0.055	-0.185	-0.192	1.00												
(14) GOV	0.472	-0.108	-0.098	0.130	0.217	-0.051	-0.061	-0.002	0.068	0.351	-0.108	-0.002	-0.100	1.00											
(15) ARB_FOR	0.215	-0.062	0.045	-0.007	0.167	-0.067	-0.014	0.108	0.146	0.108	-0.168	-0.106	-0.200	0.113	1.00										
(16) NON_ARB	0.283	-0.301	-0.131	0.051	-0.120	-0.064	-0.308	-0.063	-0.010	0.069	-0.097	-0.063	-0.197	0.221	-0.011	1.00									
(17) ln_SIZE	0.663	-0.082	-0.150	0.173	0.436	-0.052	0.040	0.140	0.240	0.295	-0.235	0.007	0.056	0.407	0.182	0.216	1.00								
(18) LEV	0.222	.0002	-0.137	0.169	0.079	-0.145	0.052	0.003	0.144	0.061	-0.179	-0.069	0.182	0.099	0.164	-0.011	0.323	1.00							
(19) COX	0.461	0.110	-0.083	-0.039	0.130	-0.052	0.162	0.228	0.133	0.007	-0.061	-0.062	0.096	0.029	0.110	-0.013	0.313	0.124	1.00						
(20) LOSS	0.026	0.182	-0.033	0.018	-0.133	-0.090	0.140	0.115	-0.096	-0.143	-0.076	-0.161	-0.004	-0.077	0.084	-0.056	-0.165	0.117	0.165	1.00					
(21) RISK	-0.053	0.003	-0.065	0.001	-0.079	-0.226	-0.005	-0.065	-0.013	0.005	0.065	0.153	-0.199	-0.019	-0.020	0.026	-0.096	-0.229	-0.222	-0.199	1.00				
(22) ROA	0.012	-0.180	0.089	-0.009	0.117	0.162	-0.109	-0.032	0.103	0.176	0.055	0.240	-0.04	0.131	-0.055	0.068	0.240	-0.105	-0.079	-0.431	0.122	1.00			
(23) BIG4	0.484	-0.029	-0.199	0.249	0.173	0.083	0.097	0.163	0.108	0.177	-0.092	0.142	0.06	0.219	0.155	0.275	0.331	0.109	0.090	-0.024	-0.031	0.022	1.00		
(24) NAS	-0.034	0.093	-0.062	-0.025	0.108	-0.063	0.083	-0.096	0.006	0.060	0.027	-0.143	-0.04	0.121	-0.095	-0.029	-0.004	-0.065	-0.032	0.038	-0.009	-0.010	-0.054	1.00	
(25) INDUSTRY	-0.063	-0.293	-0.048	-0.191	-0.006	-0.101	-0.269	-0.061	-0.001	0.084	0.161	-0.088	-0.106	0.090	-0.028	0.190	-0.106	-0.090	-0.204	-0.116	0.193	0.025	-0.076	0.149	1.00

Table 6.3: Pearson correlation matrix (* indicate the correlation is significant at level 5%)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
(1) ln_FEES	1																								
(2) B_IND	0.0857* 0.0244	1																							
(3) RD	-0.1977* 0.000	0.0488 0.20	1																						
(4) B_MEET	0.1764* 0.000	0.1294* .0007	-0.1403* 0.0002	1																					
(5) B_SIZE	0.3446* 0.000	0.1432* 0.0002	-0.035 0.347	0.1072* 0.004	1																				
(6) GEND	-0.1829* 0.000	-0.1177* 0.002	0.059 0.12	0.006 0.87	-0.03 0.35	1																			
(7) AC_IND	0.193* 0.000	0.7293* 0.603	-0.019 0.603	0.1668* 0.000	0.3089* 0.000	-0.15* 0.000	1																		
(8) AC_EXP	-0.1508* 0.000	0.0597 0.117	-0.0338 0.375	0.0329 0.388	0.1524* 0.0001	-0.12* 0.0013	0.1754* 0.000	1																	
(9) AC_MEET	0.1413* 0.0002	0.0657 0.0845	-0.1141* 0.0027	0.1747* 0.000	0.2183* 0.000	0.0335 0.3794	0.1446* 0.0001	-0.0420 0.2700	1																
(10) AC_SIZE	0.2468* 0.000	-0.0154 0.6866	0.0235 0.5384	0.0578 0.1290	0.3197* 0.000	0.0494 0.000	-1.138* 0.0028	-0.1342* 0.0004	.1065* 0.0051	1															
(11) FAMILY	-0.1739* 0.000	-0.0873* 0.0219	0.1084* 0.0044	-0.1146* 0.0026	-0.0303 0.4264	-0.0226 0.5542	-0.0009 0.9809	-0.0793* 0.0372	-.0347 0.3628	-.0962* 0.0115	1														
(12) INST_FIN	0.0601 0.1146	-0.0867* 0.0227	-0.0680 0.0744	0.1130* 0.0029	0.0632 0.0969	0.0595 0.1187	-0.0509 0.1821	0.0963* 0.0114	.0801* 0.0355	0.0629 0.0987	-.193* 0.000	1													
(13) NON_FIN_INS	-0.0037 0.9223	-0.1309* 0.0006	-0.0444 0.2438	0.0273 0.4734	-0.0338 0.3747	.1009* 0.0080	0.0124 0.7450	0.1466* 0.1466*	0.0038 0.9202	-0.0555 0.1451	-.185* 0.000	-.192* 0.000	1												
(14) GOV	0.4721* 0.0000	-0.1080* 0.0045	-0.0982* 0.0099	0.1309* 0.0006	0.2172* 0.0000	-.0516 0.1756	-0.0618 0.1047	-0.0026 0.9458	0.0689 0.0706	0.3516* 0.0000	-.108* 0.004	-.192* 0.949	-0.10* 0.008	1											
(15) ARB_FOR	0.2153* 0.000	-0.0623 0.1022	0.0453 0.2345	-0.0077 0.8400	0.1676* 0.000	-.0678 0.0753	-0.0140 0.7138	0.1089* 0.0042	.1466* 0.0001	0.1083* 0.0044	-.168* 0.000	-.107* 0.005	-.200* 0.000	.113* 0.002	1										
(16) NON_ARB	0.2830* 0.000	-0.3014* 0.000	-0.1315* 0.0005	0.0512 0.1790	-0.1203* 0.0015	-.0647 0.0893	-.3086* 0.000	-0.0637 0.0944	-.0100 0.7937	0.0696 0.0678	-.097* .0101	-0.063 0.097	-.197* 0.000	.221* 0.000	-0.011 0.770	1									
(17) ln_SIZE	0.6631* 0.000	-0.0825* 0.0303	-0.1500* 0.0001	0.1735* 0.0000	0.4367* 0.0000	-.0526 0.1672	0.0402 0.2912	0.1407* 0.0002	.2403* 0.0000	0.2951* 0.0000	-.235* 0.000	0.007 0.838	.0562 0.140	.407* 0.000	.182* 0.000	.216* 0.000	1								
(18) LEV	0.2228* 0.000	0.0002 0.9965	-0.1374* 0.0003	0.1699* 0.000	0.0797* 0.0364	-.145* 0.0001	0.0522 0.1710	0.0032 0.9334	.1445* 0.0001	0.0613 0.1075	-.179* 0.000	-0.069 0.068	.182* 0.000	.099* 0.009	.164* 0.000	-0.011 .7549	.323* 0.000	1							
(19) COX	0.4611* 0.0000	0.1109* 0.0035	-0.0831* 0.0291	-0.0394 0.3019	0.1302* 0.0006	-0.052 0.1725	0.1626* 0.000	0.2286* 0.0000	.1334* 0.0004	0.0072 0.8503	-.0614 0.107	-0.062 0.101	.096* 0.010	0.029 0.438	.110* .0038	-0.013 0.723	.313* 0.000	.124* .0011	1						
(20) LOSS	0.0260 0.4959	0.1824* 0.000	-0.0337 0.3773	0.0188 0.6214	-0.1336* 0.0004	-.090* 0.0171	0.1403* 0.0002	0.1157* 0.0023	-.096* 0.0113	-.1436* 0.0002	-.076* 0.045	-.161* 0.000	-0.004 0.906	-.077* 0.042	.084* .0267	-0.056 0.138	-.165* 0.000	.117* .0021	.165* 0.000	1					
(21) RISK	-0.0535 0.1608	0.0034 0.9293	-0.0653 0.0864	0.0019 0.9602	-0.0792* 0.0376	-.226* 0.000	-0.0056 0.8843	-0.0654 0.0861	-.0135 0.7227	0.0051 0.8939	0.065 0.087	.153* 0.000	-.199* 0.000	-0.019 0.617	-.0204 .5925	0.026 0.488	-.096* .0109	-.229* 0.000	-.222* 0.000	-.199* 0.000	1				
(22) ROA	0.0120 0.7531	-0.1802* 0.000	0.0896* 0.0186	-0.0093 0.8071	0.1176* 0.0020	.1625* 0.000	-.1097* 0.0039	-0.0329 0.3885	.1038* 0.0063	0.1766* 0.0000	0.055 0.142	.240* 0.000	-0.043 0.257	.131* .0005	-0.055 0.143	0.068 0.070	.240* 0.000	-.105* .0058	-.079* 0.037	-.436* 0.000	0.12* 0.001	1			
(23) BIG4	0.4842* 0.000	-0.0295 0.4386	-0.1997* 0.000	0.2499* 0.000	0.1739* 0.000	.0839* 0.0276	0.0972* 0.0106	0.1634* 0.000	.1082* 0.0044	0.1772* 0.000	-.092* 0.015	.142* .0002	0.067 0.076	.219* 0.000	.155* 0.000	.275* 0.000	.331* 0.000	.109* .0039	.090* .0173	-0.024 0.526	-.031 .410	0.022 0.55	1		
(24) NAS	-0.0341 0.3714	0.0934* 0.0141	-0.0628 0.0994	-0.0250 0.5126	0.1088* 0.0042	-.0633 0.0965	0.0838* 0.0278	-0.0967* 0.0111	0.0063 0.8686	0.0602 0.1140	0.027 0.477	-.143* .0002	-0.044 0.246	.121* .0014	-.095* .0121	-0.029 0.434	-0.004 0.911	-0.065 0.083	-0.032 0.402	.038 .31	-.009 .80	-0.01 .79	-.05 .15	1	
(25) INDUSTRY	-0.0637 0.0947	-0.2936* 0.000	-0.0484 0.2042	-0.1914* 0.000	-0.0066 0.8621	-.101* 0.0077	-.2698* 0.000	-0.0612 0.1084	-.0015 0.9684	0.0840* 0.0273	.161* 0.000	-.08* 0.019	-.10* 0.005	.090* 0.017	-.028 .4558	.190* 0.000	-.10* .0049	-.09* .0179	-.20* 0.000	-.11* .002	.19* 0.00	0.025 .50	-.07* .04	.1* 0.0	1

Table 6.4: variance inflation factor (VIF)		
Variable	VIF	Tolerance level (1/VIF)
B-IND	2.97	0.336794
AC_IND	2.88	0.346631
ln_SIZE	2.31	0.433192
NON_FIN_INS	1.83	0.545418
NON_ARB_FOR	1.73	0.579010
B_SIZE	1.71	0.583111
FIN_INS	1.68	0.593618
BIG4	1.55	0.643873
FAMILY	1.54	0.649276
FOR_ARB	1.53	0.654650
ROA	1.48	0.675501
AC_SIZE	1.45	0.690721
LOSS	1.41	0.710077
GOV	1.40	0.713457
INDUSTRY	1.4	0.714155
LEV	1.4	0.715717
RISK	1.35	0.739222
COX	1.35	0.739521
AC_EXP	1.30	0.771012
GEND	1.29	0.774558
B_MEET	1.23	0.815750
RD	1.16	0.860747
NAS	1.14	0.874433
Mean	1.60	
<p>lnFEES: audit fees; B_IND: percentage of board members who are independent based on JCCG definition; RD: 1 if there was role duality, 0 otherwise; B_MEET: frequency of board meetings during a year; B_SIZE: board size; GEND: percentage of female in the board; AC_IND: percentage of independent member in audit committee; AC_EXP: percentage of AC members who have financial expertise; AC_MEET: frequency of AC meetings; AC_SIZE: audit committee size; FAMILY_OWN: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by family; NON_FIN_INS: Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-financial institutions; FIN_INS: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by financial institutions (banks); GOV: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by government; FOR-ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by foreign Arab investors; FOR_NON_ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-Arab foreigners; LEV: LOSS: loss in last two years 1, 0 otherwise; BIG4: 1 if audited by big4 (affiliates), 0 otherwise; leverage; COX: number of subsidiaries; risk: percentage of current asset from total asset; ROA: return on asset; lnSIZE: natural log of firm total asset; NAS: 1 if the audit firm also provide non-audit service, 0 otherwise; INDUSTRY: 1 if manufacturing, 0 if</p>		

6.4. Regression results' discussion

Table 6.6 presents regression results of the study variables and their effect on audit quality measured by a natural log of audit fees. Given that the random effect estimation method is more appropriate (than the fixed effect one) based on Hausman test outcome (table 6.5), it is considered as the main estimation method (column 1). Even it is less favourable, the outcome of the fixed effect estimation method is very close to the random effect one, and it still gives an indication about within firm variations (column 2). Column 3 shows the outcome of Huber-White's sandwich estimator as a most common robust regression in the presence of heteroscedasticity.

6.4.1. Board of directors and audit committee mechanisms and audit quality: Hypotheses testing.

The result shows a strong evidence for the positive relationship between board independence and audit fees across all estimation methods²⁶. This suggests the Jordanian firms that have a higher proportion of independent directors on board likely demand broader audit scope (more audit fees in turn) to maintain shareholders' wealth to protect their reputation by ensuring more honest reporting produced by executives. This is consistent with the notion that independent directors utilize more extensive audits to complement their own monitoring of managerial behaviour.

The result is also consistent with agency theory as well as with prior studies. Agency theory proposes that that independent directors play an effective monitoring role over all firms

²⁶ The economic magnitude of the increase in board independence, on average, is about JOD 980 (\$1,370), which is due to 8% (after unclogging) of the sample mean audit fees which is about JOD 14,000 (\$19,000).

activities (including management behaviour) as their ultimate goal is to protect shareholders' interest in addition to avoid potential legal liabilities (Jensen and Meckling, 1976; Fama and Jensen, 1983a). Therefore, demanding high audit quality by independent directors is expected as a monitoring tool (which resulting in more monitoring cost). Prior studies also confirmed that independent directors seek differentially higher-quality audit by demanding intensive work from external auditors, suggesting that audit function is complement the board monitoring role (Carcello *et al.* 2002; Abbott *et al.*, 2003, O'Sullivan, 2000; Zaman *et al.* 2011; Bliss *et al.*, 2009; Yatim *et al.*, 2006).

Moreover, The Jordanian corporate governance code (2008) emphasises on board independence. It recommends that one third of board members should be independent as independent members provide effective monitoring, for instance, with respect to setting procedures that ensure that all shareholders, enjoy their full rights and that their rights are protected, and setting procedures that curb managers from using private information to achieve personal material or moral gains.

Contrary to the hypothesis, the findings of all employed estimation methods report a significant negative correlation between proportional of female in the board and audit fees. This result is also inconsistent with viewpoints of prior studies that the existence of women in the board improves the corporate governance and leads to more effective board, as well

Table 6.5: Hausman test outcome for the regression that examining the explanatory and control variable on the outcome variable ln_FEES.

Variables	Coefficients		Differences (b-B)
	Fixed (b)	Random (B)	
B_IND	.2441196	.302186	-.0580664
RD	-.0060516	-.0199833	.0139316
B_MEET	-.0012673	-.001416	.0001487
B_SIZE	-.007041	-.0067043	-.0003367
GEND	-.8503811	-.8902825	.0399014
AC_IND	.4484453	.3814208	.0670245
ACE_EXP	.2518815	.2410257	.0108558
AC_MEET	-.004019	-.0069895	.0029705
AC_SIZE	.0223809	.033932	-.011551
FAMILY_OWN	.5291918	.359431	.1697608
INST_FIN	.3893729	.4740966	-.0847237
INST_NON_FIN	.1385919	.1351616	.0034303
FOR_ARB	.2077524	.3369156	-.1291632
FOR_NON_ARB	-.1806559	.6085307	-.7891865
Ln_SIZE	.1223611	.1637895	-.0414284
LEV	.062224	.083703	-.0214791
COX	.0586556	.0662836	-.0076279
LOSS	.0351273	-.0296293	-.005498
RISK	-.0713014	-.0510675	-.0202339
ROA	-.1898521	-.2085926	.0187405
BIG4	.2434706	.2519239	-.0084533
NAS	-.0259267	-.0864392	.0605125
<p>Test: H0: difference in coefficients not systematic</p> $\text{chi2}(22) = (b-B)'[(V_b - V_B)^{-1}](b-B)$ <p>= 28.78</p> <p>Prob > chi2 = 0.1511</p>			

Table 6.6: Regression of the effect of board of directors characteristics, audit committees characteristics, different ownership identities and different control variables on audit quality (measured by ln audit fees) –using different estimation methods.

Variables	<i>Column1: Random-Effect Regression for all study variables</i>		<i>Column2: Fixed-effects regression</i>		<i>Column3: Robust standard error regression (Huber-White's S. estimator)</i>	
	Coefficient	z value	Coefficient	t value	Coefficient	z value
B_IND	.302	2.80***	.24	2.08**	.302	2.39**
RD	-.019	-0.49	-.006	-0.13	-.019	-0.41
B_MEET	-.001	-0.30	-.001	-0.26	-.001	-0.20
B_SIZE	-.006	-0.59	-.007	-0.51	-.006	-0.52
GEND	-.80	-3.43***	-.85	-2.84***	-.80	-2.70***
AC_IND	.38	4.27***	.44	4.34***	.38	2.65***
ACE_EXP	.24	2.78***	.25	2.38**	.24	1.75*
AC_MEET	-.006	-0.72	-.004	-0.40	-.006	-0.60
AC_SIZE	.03	0.56	.022	0.32	.03	0.54
FAMILY_OWN	.35	2.74***	.52	3.11***	.35	1.87**
INST_FIN	.47	2.51**	.38	1.26	.47	1.72*
INST_NON_FIN	.13	1.39	.13	1.24	.13	0.87
GOV	4.8	5.45***	-	-	4.8	6.65***
FOR_ARB	.33	2.36**	.20	1.20	.33	2.14**
FOR_NON_ARB	.60	2.58***	-.18	-.50	.60	1.40
LnSIZE	.16	7.17***	.12	4.10***	.16	3.89***
LEV	.08	0.77	.06	0.53	.08	0.54
COX	.06	6.55***	.05	3.54***	.06	3.22***
LOSS	-.02	-1.56	-.03	-1.82**	-.02	-1.15
RISK	-.05	-0.77	-.07	-0.93	-.05	-0.55
ROA	-.20	-2.21**	-.18	-1.98**	-.20	-1.58

BIG4	.25	7.04***	.24	6.26***	.25	2.85***
INDUSTRY	.09	1.15	-	-	.09	1.16
NAS	-.08	-0.86	-.02	-0.14	-.08	-0.96
Intercept	5.5	13.16***	6.3	11.39***	5.5	7.9***
R-square	0.73		0.48		0.73	
F statistics (<i>p</i> -value)	448.61***		8.34***		633.37***	

*sig. at level 10%, ** sig. at level 5%, ***sig. at level 1%

lnFEES: audit fees; B_IND: percentage of board members who are independent based on JCCG definition; RD: 1 if there was role duality, 0 otherwise; B_MEET: frequency of board meetings during a year; B_SIZE: board size; GEND: percentage of female in the board; AC_IND: percentage of independent member in audit committee; AC_EXP: percentage of AC members who have financial expertise; AC_MEET: frequency of AC meetings; AC_SIZE: audit committee size; FAMILY_OW: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by family; NON_FIN_INS: Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-financial institutions; FIN_INS: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by financial institutions (banks); GOV: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by government; FOR-ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by foreign Arab investors; FOR_NON_ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-Arab foreigners; LEV: LOSS: loss in last two years 1, 0 otherwise; BIG4: 1 if audited by big4 (affiliates), 0 otherwise; leverage; COX: number of subsidiaries; risk: percentage of current asset from total asset; ROA: return on asset; lnSIZE: natural log of firm total asset; NAS: 1 if the audit firm also provide non-audit service, 0 otherwise; INDUSTRY: 1 if manufacturing, 0 if services.

as enhance earning quality (Gul et al., 2011, Adams and Ferreira 2009, Nielsen and Huse, 2010, and Terjesen et al., 2009).

However, the reported negative relationship can be explained by evidences from several behavioural and management literature. Earley and Mosakowski (2000) suggested that members from different gender tend to communicate less frequently as they are less likely to share the same opinions. Similarly, Tajfel and Turner (1986) and Williams and O'Reilly (1998) suggested that the groups which contain gender diversity are less cooperative and experience higher emotional conflicts. Furthermore, Milliken and Martins (1996); Williams & O'Reilly (1998) from team diversity literature found that gender diversity is often associated with higher levels of conflict and then reduce team productivity.

Therefore, when more gender diversity among board members create more conflict, the decision making process consumes more time, and likely result in a less effective board. This conclusion is also confirmed by Lau and Murnighan (1998) and Campbell and Mínguez-Vera (2008) that found gender diversity in the board adversely affect its effectiveness. Further explanation, as being more risk averse than men (Watson and McNaughton, 2007), the over monitoring exerted by women probably leads to counterproductive results (Adams & Ferreira, 2009). In the case of Jordan, while the women are more conservative and more risk averse (Terjesen *et al.*, 2009), our result indicates that the adverse effect of conflict and/or over monitoring consequences might outweigh the mentioned advantages of gender diversity.

Other board characteristics which are role duality RD, frequency of board meetings B_MEET, and board size B_SIZE do not show significant relationship with audit quality. The result regarding role duality RD is inconsistent with our hypothesis. Also is inconsistent with Zaman et al., (2011) that presented a negative relationship between role duality and audit

quality. However, same result is obtained by O'Sullivan (2000) that did not find significant relationship between role duality and audit quality.

Agency theory suggests that separation of CEO and chairman position is necessary to ensure effective monitoring. Conversely, role duality increases the need for higher audit quality due to the increase of agency problem (Bliss, 2011). On the other hand, the negative association reported between role duality and audit fees (audit quality demanding) might be because CEOs (who hold chairman position as well) are less inclined to demand additional audit testing (O'Sullivan, 2000) possibly because they on average have better knowledge about the firms and also have access to insider information which in turn decreases their motivation for additional audit quality, and at the same time those CEOs do not behave opportunistically (i.e. show moderated level of effectiveness on average).

The number of board meetings incurred indicates board diligence (Lipton and Lorsch, 1992; Abbott et al., 2003), which implies effective board in carrying out their monitoring duties and ensure high audit quality (monitoring benefit). However, the reported result fails to find significant association between frequency of board meetings B_MEET and audit quality. This result indicates that not all board meetings are beneficial; they may just repeat useless routine tasks (Vafeas, 1999). Furthermore, more number of meetings not necessarily an indication for good oversight; some companies run many meetings than normal if they are in trouble or suffering from any other problems.

Also, given that there is an ambiguity about the effective monitoring advantages (disadvantages) came from board size; the developed hypothesis aims to test this relationship in Jordanian context. Thus, the presented results show that there is no significant correlation

between board size B_SIZE and audit quality, which is suggesting that there is no effect of board size on audit quality in Jordan.

Regarding audit committee characteristics, the findings from all estimation methods are consistent with our expectation that higher proportional of independent members AC_IND as well as proportion of members who have financial expertise AC_EXP lead to higher audit quality²⁷. These findings are consistent with agency theory propositions and in line with most of previous empirical studies. Agency theory suggests independent non-executive members in audit committees increase the committees' ability to effectively carry out their monitoring tasks over financial reporting and monitor management behaviour, which in turn reduce agency conflict (Fama and Jensen, 1983). (Abbott *et al.*, 2000; Farber, 2005) concluded that audit committee with independent members reduce probability of fraudulent financial reporting and increasing quality of financial statements.

In summary, this result confirms that independent committee's members most likely demand more audit effort, because they are more interested to pass credible financial statements to shareholders, as well as they are more concerned about their reputational loss which may arise from issuing misleading financial statements.

The result about the existence of financial expertise in audit committees AC_EXP supports our hypothesis by showing a positive relationship with audit fees. This result is supported by agency theory which assumes that financial expertise within audit committees increases quality of financial accounting process, and consequently reduces the agency problem by increasing the investors' ability to take well-informed decisions (Xie *et al.*, 2003). Also, this is constant with number of prior studies that addressed role of audit committee financial

²⁷ The economic magnitude of the increase in audit committee independency, on average, is about 1050 (\$ 1,470) and JOD 900 (\$1,260), which is due to 8% and 6.6% respectively (after unclogging) of the sample mean audit fees which is about JOD 14,000 (\$19,000).

expertise in ensuring higher audit quality (Abbott et al., 2003). However, Rainsbury et al., (2009) have not found a relationship between audit committee independence and expertise and audit quality. The researchers mentioned that these findings likely because the formation of audit committees in New Zealand was voluntary. They further suggested that companies should mandated to form audit committees which therefore will put pressure on the directors to take their monitoring role seriously.

Therefore, the study can conclude that audit committees with more members holding financial experience are related to higher audit quality in Jordan, as those members –as the Jordanian CG code expects- provide support for external auditors, solve potential management-auditors conflict, and they are better (than those who do not have this experience) in appreciating the importance of credible audit and its consequences.

Audit committee size AC_SIZE does not show significant correlation with audit fees, which is contrary to the developed hypothesis. This result is also inconsistent with number of prior studies like Vafeas & Waeglein (2007) for US and Zaman *et al.*, (2011) from UK context that documented that large audit committee is more effective and more likely than a small one to improve its monitoring role, and then in ensuring high audit quality. However, the possible explanation of this result is that the recommendations of Jordanian CG code have been fully adopted regarding the audit committees size with very small variation between firms (vast majority of the firms included in the sample have three members in their audit committees- see descriptive analysis table), this is therefore likely weakening the power of the empirical tests.

Also, the regressions' results do not present significant relationship between audit committee meetings AC_MEET and audit fees. This result is against our hypothesis, and against the

monitoring view of meetings' frequencies which suggest that more meetings lead to effective, well-informed and more diligent committee in discharging its duties particularly its oversight over auditing process (Scarbrough *et al.*, 1998; Goodwin - Stewart and Kent, 2006), and most likely demand more audit scope and requires high audit quality (Lee & Mande, 2005). However, this result is consistent with Carcello *et al.*, (2002) and Abbott *et al.*, (2003) that reported insignificant correlation between audit committee meetings and audit quality. Too frequent meetings not necessary indication of diligence, they might be just to mimic other firms or to meet the code recommendations as proposed by institutional theory (Cohen *et al.*, 2007), and therefore they might be futile and unduly.

6.4.2. Ownership types and audit quality: Hypotheses testing

Furthermore, regarding the second research question which is covered by ownership identities hypotheses, the findings show positive relationship between family ownership FAMILY, financial institution ownership INS_FIN, government ownership GOV, foreign Arab investors FOR_ARB and non-Arab investors FOR_NON_ARB, and audit quality. However, Non-Financial institution ownership does not show significant correlation with the outcome variable.

As expected, family ownership shows significant association with audit quality under all employed estimation methods. This result supported by entrenchment effect view which assumes that higher proportion of family ownership increase agency conflict, and therefore creates the need for higher audit quality in order to mitigate agency cost by protecting interests of other shareholders (Azoury and Bouri, 2014). In case of family members control a firm, shareholders have incentives to take action for instance appointing high quality auditor

in order to curb them from “harming themselves as well as those around them” (Jensen, 1994: 43).

This reported result confirms Niskanen (2010) which documented a positive correlation between family ownership and audit quality, and it argued that in high family ownership firms there is a concern that the management acts for the controlling family and disregards other owners. Also, the result is in line with Wang (2006) that found that family ownership is correlated with lower abnormal accruals, higher earnings quality.

The result might be also supported by argument of Anderson and Reeb (2003) which mentioned that family firms have reputational concern and they are interested to protect their reputation, and therefore less inclined to publish misstated financial statement. Given, Jordan is a small community, this scenario is relevant for Jordan where name of many firms are related to (easily traced to) the families’ name. Consequently, this might increase incentives of family members to ensure high audit quality in order to avoid the adverse consequences (e.g. reputation damage) of presenting fraud financial statements.

Moreover, the regression result regarding financial institution ownership *INS_FIN* supports our hypothesis. This is consistent with number of empirical studies which agreed about the important role of banks ownership as providers of effective monitoring and decrease the agency problem (Barth, Caprio, Levine 2006; Coffee, 1991). The bank sector in Jordan is more developed, well-managed and organized, and more committed with a corporate governance code compared to other sectors (Matar and Noor, 2007). Also, given banks are main source of external funds in Jordan, particularly for the firms they invest in (AlFayoumi and Abuzayed, 2009), banks have incentives to monitor financial reporting and penalize

managers²⁸ who report low earning quality, and therefore they are more interested in credible audit quality.

On the other hand, non-financial institution INS_NON_FIN does not show significant relationship with audit quality. This result from Jordanian market can be justified by the concerns that raised by Alwshah (2009) about the effectiveness of equity firms (non-financial firms) in Jordan regarding their ability to exert sufficient monitoring in other firms they invest in. He stated that many of those investors have significant business relationships with the investee firms, which might weaken their monitoring ability. Furthermore, Al-Fayoumi et al., (2010) and Al-Fayoumi *et al.* (2009) concluded that non-banks institutions in Jordan are less effective in constraining managerial behaviour of earnings management than banks.

Furthermore, consistent with our hypothesis, audit quality is significantly and positively associated with government ownership GOV. This result is not consistent with the study that addressed the relationship between government ownership and audit quality (Niemi, 2005), which found that there is no relationship reported. Niemi (2005) study is different contextually and methodologically from this study. Niemi's study was conducted in Finland which is contextually different from Jordan (e.g. financial market and audit regulation, and motivations of government ownership). Also, Niemi considered only one year in his study and also he employed a dummy variable for state ownership (1 if majority of shares owned by state, 0 otherwise).

In addition, though Zeitun and Tian (2007) found that government shareholding in Jordan does not play effective role and has a negative impact on financial performance; their used data is old (1989-2002), and the government ownership becomes more organized after the

²⁸ e.g. do not renew or do not provide an additional loan

privatization and focuses only on the most important and strategic investment. Therefore, the result is expected because the behaviour of government representatives should be consistent with the overall government strategy regarding attracting investments.

It can be noted that the government variable GOV is omitted under fixed-effect estimation method. Given that fixed-effect estimation method considers variations within firms only; any time-invariant variable will not be presented under this estimation method. The government ownership in Jordanian firms is stable over the study period and does not change “within” firms.

Both foreign ownership identities; foreign-Arab FOR_ARB and foreign-non-Arab FOR_NON_ARB investors are positively and significantly correlated with audit quality, which is consistent with the hypotheses. This indicates that the foreign owners with substantial ownership exert more pressure on management to improve corporate governance, and also they ask for high audit quality to make sure that their interests are sufficiently protected. This result support prior studies arguments that foreign investors require more reliable and transparent information to avoid expropriation by managers (Ben-Nasr et al., 2015), and therefore reduce information asymmetries (Jiang and Kim, 2004).

Given that both types of foreign investors show significant correlation under random-effect method, the coefficient of non-Arab ownership is higher than Arab ownership coefficient which means the effect of changes of non-Arab investment ratio on the mean of audit fees is higher than the effect of Arab investment ratio. This seems plausible (as discussed before) because non-Arab investors face higher agency problem than Arab investors due to cultural, language and geographical differences.

However, apart from the coefficient, the robust standard error method has weakened the relationship between foreign non-Arab FOR_NON_ARB and audit fees and became insignificant²⁹. Insignificant relationship might be explained partially by that non-Arab foreigners invest in Jordan as an evolving market on the long term (Tayem, 2015) and the level of monitoring they exert might be less than expected³⁰.

Moreover, financial institution ownership INS_FIN, foreign-Arab FRO_ARB and foreign-non-Arab FOR_NON_ARB ownership turned to be insignificant under fixed-effect estimation method. The most likely interpretation is that the variation of these types of investment within firms is very small³¹, and then their within-firm relationship to outcome variable will be insignificant. Cameron and Trivedi, (2010: 238) stated that “in the fixed-effect model the coefficient of a regressor with little within variation will be imprecisely estimated and will be not identified if there is no within variation at all”.

6.4.3. Results of employed control variables

The result regarding firm size ln_SIZE, complexity COX, and big audit firm BIG4 are consistent with expectations and in line with Zaman *et al.*, (2011), Abbott *et al.* (2003) and Carcello *et al.* (2002) that confirmed the positive relationship between these variables and audit fees. The negative significant relationship of profitability ROA is also consistent with

²⁹ This likely because FOR_NON_ARB variable suffers from inconstant variance (heteroscedasticity) which affects the coefficient to be inefficient.

³⁰ Some foreign investors appoint local representatives to follow their investment in ASE (ASE, 2015), so in this case they do not exert direct monitoring.

³¹ This was clear for the researcher during the collecting data process.

our expectation. More audit effort is required for clients with bad financial outcomes, and conversely profitable firms are perceived as a less risky (Pratt and Stice, 1994).

Moreover, the result presents that providing non-audit service NAS by same external auditor does not have significant relationship with audit fees. Jordan has regulated non-audit services to preserve auditor independence, and most of non-audit services are not allowed to be done by same auditors who do the statutory audit. However, some firms still buy some consultation services from their incumbent auditors. The result indicates that there is no concern about auditor independence particularly regarding the economic bond between auditors and their clients. Further, regarding industry variable, the results show that there is no significant difference between manufacturing sector and service sector. This is consistent with Matar and Noor (2007) that concluded that these two sectors is quite similar to each other in terms of corporate governance practises and their management structure, and largely different from financial sector in Jordan.

Poorly performing firms are often perceived as being riskier (Whisenant et al., 2003; Hay et al., 2008) and therefore auditors have to exert a greater audit effort due to increased risk. However, the regression result indicates a negative relationship between LOSS and audit fees (not strong relationship as the coefficient is 0.02). The possible reason for this is that even these firms report a loss, auditors may not pay much attention because they do not expect litigation consequences as the litigation risk in Jordan is very low. Also, given that the study considers the demand side effect of audit quality, directors may not ask auditors for more audit effort albeit their firms is reporting loss e.g. they may do this to decrease the level of transparency and in case they want to hide some unfavourable events.

Also, the regression shows no significant relationship with leverage LEV. As the concern of the litigation risk usually encourages auditors to pay more attention and produce high audit quality in a high leverage firms, this is not the case in Jordan where the litigation risk is very low. So, this may justify the insignificant relationship.

6.5. Further analysis: scaling audit fees according to firm size

Firm size is an agreed determinant of audit fees across literature, as well as it has a strong effect on different firms' characteristics (overwhelming influence of large firms). Thus, by taking consideration of the effect of firms' size (by scaling audit fees according to firm size), the study can obtain a better indication of the effect of study variables on audit fees.

Similar to Simunic, 1980; Carcello et al., 2002, Abbott et al., 2003 and Mitra et al., 2007, this study scales audit fees according to firm size in order to linearise the relation between fees and size, and to reduce spurious correlations and heterogeneity of variance due to size (Kinney et al., 2004; Simunic, 1980). Simunic (1980: 179) stated that "by using size-deflated audit fees as the dependent variable, an implicit interaction is assumed between [deflated fees] and each of the independent variables and the error term in the determination of the observed undeflated value of fees. That is, the effect of each of the independent variables in the regression function was assumed to be conditional on auditee size".

The results in column 1 (table 6.7) are outcome of fixed-effect estimation method³², given Hausman test gives indication about appropriateness of this estimation method³³. Also, given that the outcome of Breusch-Pagan/Cook- Weisberg test still indicates some evidence of heteroscedasticity; robust standard error method (Huber-White's sandwich estimator) is employed as a more reliable method to diagnose this issue (column 2).

³² As discussed before, fixed-effect method omits the time-invariant variables (e.g. GOV and Industry), and also financial institution ownership INS_FIN is insignificant under this method which is likely due to insignificant variance within firms.

³³ When fixed-effect model is appropriate, it is considered as a fully efficient estimation method, and the estimations of random-effect method become inconsistent (Cameron and Trivedi, 2009). Given this, results of random-effect method have not been shown.

Table (6.8) shows the regressions results of the effect of board of directors' variables, audit committees' variables, ownership types' variables and control variables on the new outcome variable (scaled fees). The results are close to the results presented before by using natural log of fees as an outcome variable. These variables retain their significant correlation with audit fees even after considering the effect of firms' size.

However, when taking firm size into account while testing the model, Arab-foreign ownership (FOR_ARB) and non-Arab foreign ownership (FOR_ARB) do not have a significant relationship with the new outcome variable (fees scaled to firm size). This result weakens the outcome presented before, which reported a significant association between these ownership identities and audit fees (i.e. make it less significant). Moreover, this likely suggests that foreign investors mainly target large size firms to invest in. This is also supported by (Dahlquist and Robertsson, 2001) who found a strong correlation between foreign ownership and firms' size (i.e. foreign investors are more inclined to invest in large firms than small ones).

In addition, board size (B_SIZE) shows a significant negative relationship with the outcome variable. This finding in table 6.8 differs from the one presented before while considering *ln_FEES* as an outcome variable (table 6.6). Given that a significant relationship is documented between firm size and board size (Coles et al., 2008)³⁴, the previous reported result is likely to be less reliable (than the later one) due to the confounding effect with firm size.

Therefore, the significant negative association between board size and audit fees (scaled audit fees) is supported by number of arguments from prior studies. Large board size might results

³⁴ Also, it is clear from the collected data-set that large firms in Jordan have large board sizes.

in higher coordination cost and free riding problem (Jensen, 1993), less effective in monitoring management (Jizi *et al.*, 2013), more time for decision making, and more communications problems (Bliss, 2011). Consequently, large board might lead to negative impact on audit quality by reducing the board's monitoring effectiveness.

Another important change from employing the new outcome variable is that Big 4 firms turned out to have insignificant relationship with audit fees which indicates that firm size affect inferences of this variable — given a high association between firm size and appointing Big-4 auditors. This result weakens the result presented in table 5.6, and the study can conclude that, after taking account of firm size, there is no strong association between Big-4 offices and audit quality. This also confirms the discussion raised before that the Big-4 firms are working in Jordan through local firms (affiliates) and they not necessary supply better audit quality than other local audit firms.

Table 6.7: Hausman test outcome for the regression that examining the explanatory and control variable on the outcome variable ln_FEES.

Variables	Coefficients		Differences (b-B)
	Fixed (b)	Random (B)	
B_IND	1.191379	1.097463	.0939157
RD	-.0102367	.0178732	-.0281099
B_MEET	-.0043906	.0004117	-.0048022
B_SIZE	-.0897596	-.1294415	.0396819
GEND	-2.548116	-1.914062	-.6340537
AC_IND	1.998416	1.428404	.57001
ACE_EXP	.6632173	.635779	.027437
AC_MEET	-.0276372	-.0350365	.0073993
AC_SIZE	.2967851	.2714036	.0253816
FAMILY_OWN	2.369578	1.694031	.6755468
INST_FIN	-.1607503	1.00873	-1.16948
INST_NON_FIN	-.4088678	-.103906	-.3049616
FOR_ARB	-.1164673	.3905348	-.5070022
FOR_NON_ARB	.6552449	1.14026	-.4850187
LEV	.4698638	.0588704	.4109934
COX	-.0362707	.066539	-.1028098
LOSS	-.0589982	-.0399142	-.019084
RISK	-.6529328	-.5681273	-.0848055
ROA	-1.06790	-1.117266	.0493643
BIG4	.2111375	.3083471	-.0972097
NAS	-.028414	-.0432338	.0148198
<p>Test: H0: difference in coefficients not systematic</p> $\chi^2(22) = (b-B)'[(V_b - V_B)^{-1}](b-B)$ <p>= 66.73</p> <p>Prob > χ^2 = 0.0000</p>			

Table 6.8: Regression of the effect of board of directors characteristics, audit committees characteristics, different ownership identities and different control variables on audit quality (measured by scaled audit fees) –using different estimation methods.

Variables	Column1: Fixed-effects regression		Column3: Robust standard error regression (Huber-White's sandwich estimator)	
	Coefficient	t value	Coefficient	z value
B_IND	1.19	2.80***	1.09	1.77*
RD	-.01	-0.06	.017	0.13
B_MEET	-.004	-0.25	.0004	0.02
B_SIZE	-.089	-1.82*	-.129	-2.58***
GEND	-2.5	-2.34**	-1.91	-2.30**
AC_IND	1.9	5.32***	1.42	1.68*
ACE_EXP	.66	1.72**	.635	1.61*
AC_MEET	-.027	-0.76	-.03	-1.12
AC_SIZE	.29	1.16	.271	1.20
FAMILY_OWN	2.36	3.84***	1.69	2.11**
INST_FIN	-.16	-0.14	1.0	1.68*
INST_NON_FIN	-.40	-1.00	-.10	-0.19
GOV	-	-	4.4	3.28***
FOR_ARB	-.116	-0.19	.39	0.82
FOR_NON_ARB	.65	0.51	1.1	1.33
LEV	.46	1.11	.05	0.12
COX	-.036	-0.60	.06	0.95
LOSS	-.058	-0.84	-.03	-0.45
RISK	-.65	-2.38**	-.56	-1.67*
ROA	-1.06	-3.10***	-1.1	-1.79*
BIG4	.21	1.51	.30	1.38
INDUSTRY	-	-	.38	1.40
NAS	-.028	-0.04	-.04	-0.13
Intercept	.177	0.18	.48	0.43
R-square	0.18		0.17	
F statistics (p-value)	5.92***		136.01***	

*sig. at level 10%, ** sig. at level 5%, ***sig. at level 1%

lnFEES: audit fees; B_IND: percentage of board members who are independent based on JCCG definition; RD: 1 if there was role duality, 0 otherwise; B_MEET: frequency of board meetings during a year; B_SIZE: board size; GEND: percentage of female in the board; AC_IND: percentage of independent member in audit committee; AC_EXP: percentage of AC members who have financial expertise; AC_MEET: frequency of AC meetings; AC_SIZE: audit committee size; FAMILY_OW: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by family; NON_FIN_INS: Proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-financial institutions; FIN_INS: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by financial institutions (banks); FOR_ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by foreign Arab investors; FOR_NON_ARB: proportion of aggregate blocks of at least 5% of the firm's outstanding shares held by non-Arab foreigners; LEV: LOSS: loss in last two years 1, 0 otherwise; BIG4: 1 if audited by big4 (affiliates), 0 otherwise; leverage; COX: number of subsidiaries; risk: percentage of current asset from total asset; ROA: return on asset; NAS: 1 if the audit firm also provide non-audit service, 0 otherwise; INDUSTRY: 1 if manufacturing, 0 if services.

6.6. Test for potential endogeneity

All empirical models suffer from omitted variables to different extents (Hay et al., 2006). The general assumption is that the relationship between dependent variables and explanatory variables does not have a systematic effect on the omitted variables, i.e. the error term is unrelated to the explanatory variables (Gujarati, 2003). If this assumption fails, the least-squares estimator can no longer be given a causal interpretation (Cameron and Trividi, 2009).

Endogeneity is defined by Roberts and Whited (2013: 493) as “a correlation between the explanatory variables and the error term in a regression”. So, endogeneity may occur because of the independent variable's omission in the regression, which would result in the error term being correlated with the explanatory variables, and therefore violating a basic assumption behind ordinary least squares (OLS) regression analysis (Roberts and Whited, 2013; Abdallah *et al.*, 2015). Also, it may arise in a case of the dependent variable being influenced by one or more independent variables, which in turn are influenced by the dependent variable (simultaneous effect).

The panel data approach allows us to get consistent estimators in the presence of omitted variables that are caused by unobservable heterogeneity among companies in a cross-sectional sample (Wooldridge, 2010). Therefore, by using the same cross-sectional units at different points of time, the panel approach mitigates the (control) endogeneity problem (Hermalin and Weisbach, 1991; Wooldridge, 2010). Moreover, Yermack (1996), Wooldridge (2010), and Li (2011) stated that employing a regression method (e.g. the fixed effect method) and controlling variables like industry dummies in the panel data approach helps to control endogeneity caused by omitted variables.

In a study of this type, we have a concern of simultaneity (causality) as one of endogeneity³⁵. Evidence from previous empirical studies suggests that there is a significant association between the fees paid for statutory audit services and the fees paid for non-audit services when both are jointly provided by the same auditor (Simunic, 1984; Palmrose, 1986). However, the findings about the nature of this association are mixed. On one hand, knowledge spillovers from providing non-audit service contemporaneously with the audit service reduce the fixed or marginal costs of audits or non-audit services, which in turn affect the level of audit fees or non-audit fees, depending on the price elasticity of the audit demand function (Simunic, 1984). Thus, the “knowledge spillovers” view suggests a positive relationship between audit and non-audit fees.

On the other hand, external auditors may discount the fees of a statutory audit in order to gain a higher profit margin on non-audit services (Hillison and Kennelley, 1988; Felix *et al.*, 2005). Therefore, the view of using audit services as a “loss-leader” suggests a negative relationship between audit and non-audit fees.

³⁵ When the endogeneity problem (in the form of the simultaneity effect) is present, two options are common in the literature to deal with this problem: the use of instrumental variables (IV) regression (Li, 2011) and the use of 2SLS estimation (Cameron and Trivedi, 2009). To use instrumental variables, there are strict requirements that need to be fulfilled. Given this strict requirement, most of studies go through the 2SLS (Bin-Muhamed, 2013).

Therefore, Given that the presence of endogeneity may cause regression to be biased and inconsistent, the Durbin-Wu-Hausman test has been used to check for the presence of endogeneity. Durbin-Wu-Hausman tests the null hypothesis that the residual values of the endogenous variables are jointly equal to zero. If this test shows a significance level of F-statistic, the null hypothesis is rejected and this means that an endogeneity problem is present. Accordingly, the result of Durbin-Wu-Hausman test indicates that the causality effect is not a problem.

However, given the above discussion and given the use of panel data which, to some extent, alleviate the effect of endogeneity (Hermalin and Weisbach, 2001; Wooldridge, 2010), this does not provide a definitive solution to the issue regarding the relation between most of the explanatory variables (corporate governance variables) and audit fees and unobservable heterogeneity can still not be ruled out.

6.7. Conclusion

This empirical model examines whether the characteristics of boards of directors, audit committees and different ownership identities affects audit quality using secondary data. I.E., Is the audit function a complement to boards of directors' and audit committees' roles with regards to monitoring duties, particularly in the environment which is characterised by a weak legal system and where governance regulations are still underdeveloped? This is motivated by the recent effort exerted by the government in Jordan to enact different regulations (corporate governance code in particular) in order to strengthen the financial market.

The results are consistent with the notion that more independent boards are seeking to protect their reputation capital³⁶ and to promote shareholder interests by purchasing differentially higher-quality audit, and this is in line with agency theory propositions. Although boards in such contexts are still dominated by male members, there are some females on a number of boards across listed companies and the regression result indicates that the existence of females on the boards adversely affects audit quality (likely due to more conflict or to over-monitoring consequences). Furthermore, the result shows that board size is not an indication of more board effectiveness; instead a large board might be related to more communications and decision-making problems, and lead to a negative impact on audit quality by reducing the board's monitoring effectiveness as documented previously by Bliss (2011).

Audit committees' independence and financial experience also have an essential monitoring role to assure the quality of financial reporting and serve as an important governance mechanism, which is consistent with most prior studies (Turley and Zaman, 2004; Zaman *et*

³⁶ Director independence has been used in literature (O'Sullivan, 2000; Abbott et al., 2003; Boo and Sharma, 2008) as a measure of directors' desire to protect their reputation capital

al., 2011). However, the effectiveness of other audit committee characteristics with regards to improving audit quality is either marginal or insignificant.

Obviously from the reported results, the board of directors' and audit committees' independence stands as the most valuable audit quality mechanism. Therefore, the regulatory bodies can recognise the essential role played by independent directors as one of the important component of the corporate governance system in Jordan. Also, firms' directors can benefit from this result by using it as a parameter to assess how board and audit committee characteristics may affect financial reporting quality.

Furthermore, the most important result from the ownership identities is that family, government and bank ownership particularly are found to play a significant role in ensuring credible audit quality. This result has implications for regulatory bodies e.g. the Jordan Securities Commission (JSC) to encourage the participation of these types of investor in the capital markets. However, analysis shows the insignificant role of non-financial institutions in audit quality. This result also has important implications for policy makers, for instance to encourage and motivate these institutions to provide effective (productive) monitoring over the firms they invest in as this may enhance the reliability and transparency of reported earnings. These results assist financial market participants in Jordan to make better informed investment decisions.

CHAPTER SEVEN: DISUSSION OF FINDINGS – QUESTIONNAIRE SURVEY MODEL

7.1. Introduction

Boards of directors, audit committees and external auditors are essential players in the recent corporate contexts around the world. In Jordan, the relevant regulations emphasise the importance of these players as important parts of the corporate governance system. Therefore, their perceptions would have significant implications for the objectives of this study. This chapter presents an analysis and discussion of the perceived roles played by the corporate governance mechanisms, e.g. boards of directors, audit committee activities and ownership structure, on audit quality in the Jordanian market.

The chapter is organised as follows: The second section provides a description of the respondents in terms of the demographic information obtained by the questionnaires. The third section presents the respondents' views about audit quality attributes and potential proxies for audit quality in Jordan. The fourth, fifth and sixth sections represent analyses of respondents' views about the roles in audit quality of boards of directors, audit committees and ownership structure respectively. The seventh section shows the recommendations to the current governance code. The final section contains the chapter's conclusions.

7.2. Descriptive statistics of respondents' information

This section presents descriptive statistics for the three groups of respondents based on their positions i.e. directors (who are not member of audit committees), audit committee members and external auditors. Table 7.1 shows the number of questionnaires sent and the response rate for each group. It is important to mention here that this overall response rate (37%) is an acceptable response rate for a questionnaire survey and is also higher than the average response rate of studies in similar contexts. Neuman (2000) reports that response rates for questionnaire surveys, generally, range between 10% and 50%, and this takes into account the survey environment. Furthermore, Saunders et al. (2007: 215) stated that an examination of recent business surveys reveals response rates as low as 10% - 20%.

Table 7.1: structure of population and study sample

Groups	Population (<i>N</i>)	Sample size (<i>n</i>)	Returned questionnaires	Response rate	Overall response rate
Directors in boards (not members of audit committee)	875	267	87	32.6%	37%
Audit committee members	525	222	79	35.5%	
External auditors	50	50 ³⁷	33	66%	

Table 7.2 shows respondents' gender, work experience and educational level for the three groups, and directors' independence, their financial experience and whether they

³⁷ Based on the sample size equation, the minimum sample size of auditors should be 44. However, the study will consider all of the population because it is recommended to consider all the population if its size is below 50 cases (Henry, 1990).

have role duality (the last three characteristics are not applicable to the third group, which is the external auditors). As you can see in Table 7.2 (panels A-F), the analysis shows the number of respondents in each group and their percentage.

It can be clearly noted that the response rate for the auditors group is the highest, at 66%, whereas the response rates for board and audit committee members are 32.5% and 35.5% respectively. This result is due to the small size of auditor population compared to the directors' population, and also it was much easier to get access to auditors and follow up the circulated questionnaire, while it was more difficult to get access to directors due to the nature of their work, as most of them are not available at the company site all of the time. Alghamdi (2012) reported a response rate for directors and audit committee members 20% lower than the auditors' response rate.

In terms of length of work experience, the figures in Table 7.2 (panel A) show that about half of respondents (47.2%) have more than 8 years and up to 12 years work experience in their position, and 20.1% of them have more than 12 years of experience; 25% of respondents have between 4 years and 8 years of experience and, finally, respondents who have held their positions for 4 years or less represent 8.5%. Therefore, more than two thirds of the respondents have long work experience (more than 8 years). These results are consistent with expectations, as these groups usually retain their positions for a long period of time in Jordan³⁸.

The educational level for the respondents has been examined. As indicated in Table 7.2 (panel B), about one third of the respondents hold postgraduate qualifications, a majority of them hold a first degree (64.8%), and only 6% have lower than degree

³⁸ This was also clear for the researcher when he was collecting the data about directors from annual reports over 2009-2014.

qualifications. This result indicates that the respondents are well educated, which in turn enhances their awareness about corporate issues e.g. audit and corporate governance. Panel C shows the composition of respondents in terms of their gender. It can be noted that women's participation in such positions is still limited (5.5%) compared with other developed countries and this is expected as women in Jordan are still underrepresented in workforce and in the business community in particular.

The remaining three characteristics apply to two groups, which are the directors who are not members of audit committees and audit committee members. With regard to directors' independence, as shown in panel D, half of the respondents from these two groups are independent (51%), and this proportion increases for directors who are members of audit committees (57%), compared to other members of the boards of directors (41.4%). It is noticeable that there is a similar composition in terms of directors who have financial expertise (panel E); 35.4% of audit committee members have financial experience compared to 19.5% for other board directors. These figures make sense and they represent the actual situation in Jordan because the Corporate Governance Code (2008) added more emphasis on the importance of independence and financial experience in audit committee members than other directors, i.e. it recommends that audit committees should comprise three members, two of them should be independent and one should have financial expertise.

Also, only 4% of the sample occupied the chairman and CEO positions at the same time (role duality): 9% are the chairman but do not hold the CEO position, and the vast majority of the directors (87%) are not chairmen. In conclusion, a majority of the respondents are well educated as they have higher academic qualifications; they have good work experience in their field as well as a high proportion of them having

financial experience. This consequently suggests that they are aware of the issues raised in the questionnaire, and this also leads us to expect that their perceptions should be rational and there should be credibility in the findings.

Table 7.2: descriptive statistics for the three groups of respondents

Panel A: Experience								
Length of experience (years)	Board of directors		Audit committee		External auditors		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
4 or less	9	10.3	6	7.6	2	6.1	17	8.5
More than 4, up to 8	16	18.4	29	36.7	3	9.1	48	24.1
More than 8, up to 12	41	47.1	38	48.1	15	45.5	94	47.2
More than 12	21	24.2	6	7.6	13	39.4	40	20.1
Total	87	100	79	100	33	100	199	100
Panel B: Qualification								
Qualification	Board of directors		Audit committee		External auditors		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Postgraduate	37	42.5	15	19	6	18.2	58	29.1
Bachelor	45	51.8	57	72.2	27	81.8	129	64.8
Others	5	5.7	7	8.9	0	0	12	6
Total	87	100	79	100	33	100	199	100
Panel C: Gender								
Gender	Board of directors		Audit committee		External auditors		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Male	82	94.3	78	98.7	28	84.8	188	94.5
Female	5	5.7	1	1.3	5	15.2	11	5.5
Total	87	100	79	100	33	100	199	100
Panel D: independence (does not apply to auditors)								
Independence	Board of directors		Audit committee		External auditors		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	36	41.4	45	57	n/a	n/a	81	49
No	51	58.6	34	43	n/a	n/a	85	51
Total	87	100	79	100	n/a	n/a	166	100
Panel E: Financial experience (does not apply to auditors)								
Financial experience	Board of directors		Audit committee		External auditors		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	17	19.5	28	35.4	n/a	n/a	45	27
No	70	80.5	51	64.6	n/a	n/a	121	73
Total	87	100	79	100	n/a	n/a	166	100

Panel F: Duality (does not apply to auditors)								
Duality	Board of directors		Audit committee		External auditors		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Chairman and CEO	6	6.9	0	0	n/a	n/a	6	4
Chairman not CEO	14	16.1	1	1.3	n/a	n/a	15	9
Director not Chairman	67	77	78	98.7	n/a	n/a	145	87
Total	87	100	79	100	n/a	n/a	166	100

7.3. Audit quality attributes and proxies as perceived by the respondents

As presented before in section 5.4.3.3, audit quality is a combination of competence and independence (DeAngelo, 1981; Catanach and Walker (1999) and Porter and Simon (2003), because they jointly contribute to high audit quality. Though the respondents who are members of boards of directors (including audit committee members) and external auditors are expected to be aware of the audit quality concept and what it means, this section is added just to discover to what extent they correctly understand audit quality before going on to the next questions in the questionnaire (also to make sure that their perceptions are consistent with the definition of audit quality across the literature).

As presented in Table 7.3, for the competence part of audit quality, the overwhelming majority of respondents from the three groups emphasise its importance as an audit quality attribute, i.e. more than 92% agreed that technical competence and audit work experience are important attributes, with an overall response mean of 4.61 out of 5. This result supports the importance of the competency requirement in the audit quality definition (DeAngelo, 1981). The importance given to the auditor competency is consistent with the notion that auditor competency increases auditors' abilities to deliver high audit quality by enhancing their knowledge of financial statement errors, and influencing their cognitive representations (Libby and Frederick, 1990; Catanach and Walker, 1999; Francis, 2004; Knechel *et al.*, 2012; DeFond and Zhang, 2014).

Auditors' knowledge of the local business environment is fed into auditor competency and is also rated as an important audit quality attribute. Moreover, the response was

similar for the independence and objectivity attributes; 94% from overall responses appreciate the importance of independence and the objectivity of auditing work as important attributes to feed into audit quality. The perceptions of the respondents to these attributes are not significantly different.

It is worth mentioning here that audit regulations in Jordan play an important role in ensuring that auditors are competent and independent. According to the Certified Accounting Profession Law (2003), to be eligible to practice auditing, the person must have an academic degree, pass a professional exam and must have seven years' experience in auditing and accounting. Also, after being authorised, the auditor must attend training courses no less than 20 hours annually as continuous learning in order to keep pace with the latest updates. Moreover, the regulations ban auditors from providing – at the same time – most of the non-audit services for the same clients, in order to maintain their independence.

The above findings are in line with previous studies that emphasised importance of auditor's technical competence and work experience as ways to enhance auditors' abilities, enhance their awareness of financial statement misrepresentation (Libby and Frederick, 1990; Catanach and Walker, 1999; Francis, 2004; Knechel *et al.*, 2012; DeFond and Zhang, 2014). In addition, the agency theory highlights the importance of auditing as an important governance mechanism through which owners can seek to monitor management. However, the effectiveness of the auditor role depends mainly on the audit quality provided. Therefore, the auditor's competence and experience are important attributes that contribute to audit quality and subsequently play a vital role in decreasing agency problem.

Auditor's technical competency as reported by Craswell, Francis, & Taylor (1995) reduces auditors' start up and learning costs, and may offer more structured audit techniques that enhance audit quality. Independence and objectivity on the other hand are essential in helping auditors to achieve audit work and express an opinion not influenced by personal bias (Brenda and Jon, 2003) or management pressure. If auditors possess these attributes they are expected to deliver high audit quality.

Overall, it can be concluded that the respondents attached more importance to the competence and independence attributes in forming audit quality, as defined across audit regulation and literature. This therefore indicates that the respondents are aware of the audit quality concept, as expected.

Table 7.3: Responses about audit quality attributes analysed by respondent groups

Audit quality attributes	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall Mean
	Response percentage and response mean						Response percentage and response mean						Response percentage and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
Technical competence	2.3	2.3	2.3	14.9	78.2	4.64	1.3	2.5	3.8	25.3	67.1	4.54	0	6.1	3	6.1	84.8	4.70	4.61
Audit experience	2.3	3.4	2.3	17.2	74.7	4.59	1.3	2.5	5.1	21.5	69.5	4.56	0	5.5	4.4	6.3	83.8	4.70	4.59
IT proficiency in audit	4.6	3.4	8	24.1	59.8	4.31	8.9	2.5	20.3	24.1	44.3	3.92	3	0	21.2	30.3	45.5	4.15	4.13
Local knowledge (Jordanian business environment)	3.4	2.3	4.6	19.5	70.1	4.51	2.5	5.1	5.1	17.7	69.9	4.47	0	3	15.2	9.1	72.7	4.52	4.49
Independence	2.3	2.3	2.3	12.6	80.5	4.67	1.3	2.5	5.1	13.9	77.2	4.63	0	3	0	6.1	90.9	4.85	4.68
Objectivity	3.4	2.3	1.1	14.9	78.2	4.62	1.3	2.5	5.1	14	77.1	4.63	0	3	6.1	9.1	81.8	4.70	4.64
1-5 are Likert scale intervals: 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree																			

Furthermore, Table 7.4 presents the perceptions of respondents about the extent to which audit fees, Big 4 affiliates, audit firm size and industry specialisation are perceived as an indication of audit quality in the Jordanian context. As discussed before (in section 5.4.3.3), the rationale behind this question is to support the discussion of the first model of this thesis and also to contribute to the current debate in literature by shedding light on the most appropriate proxy for audit quality in such context(s). The results in Table 7.4 show that audit fees level is the item that obtained the most agreement, while other potential indicators obtained lower agreement.

It can be noted from Table 7.4 that the audit fee level is the most important indication for audit quality in Jordan. Most of the respondents (71.3% of the board directors; 78.5% of audit committee members and 73% of auditors) agreed about this proxy in this context. This result is not surprising; it is consistent with the conclusion of the first part of this thesis, and also consistent with the outcomes of prior studies (O'Sullivan, 2000; Felix Jr and Gramling, 2001; Carcello *et al.*, 2002; Abbott *et al.*, 2003; Goodwin - Stewart and Kent, 2006; Singh and Newby, 2010; Zaman *et al.*, 2011). Catanach and Walker (1999) commented that higher audit fees contribute to audit quality directly by encouraging auditors to do more audit work, and indirectly as a finance source to invest in qualified people and to train them.

Importantly, this result is consistent with the regression result presented before in the first model (see table 6.6). This regression shows that Big4 affiliates in Jordan have insignificant relationship with audit quality, and also confirms the discussion raised before that the Big-4 firms are working in Jordan through local firms (affiliates) and they not necessary supply better audit quality than other local audit firms.

In this vein, previous studies from Jordan (Al-Khaddash *et al.*, 2013; Almomani, 2015) also reported the appropriateness of audit fees as a proxy of audit quality in Jordan. Al-Khaddash *et al.* (2013) concluded in their survey that Jordanian auditees (clients) should provide high fees as an incentive for auditors to enable them to do better work, and to be satisfied and comfortable about that work. They further reported that an auditor loses face if he delivers poor audit quality while he receives high audit fees.

A number of respondents added comments on this question, as unrestricted space in the questionnaire has been offered to them. There are some relevant comments that support the above discussion about audit fees levels, as follows:

One of the auditors wrote:

I believe that audit fees level is connected with the performed audit work.

One of the audit committee members wrote:

When we give the auditor high remuneration we can ask him with more confidence and without reluctance to spend more time and do further audit tests when necessary.

Also, there is an interesting comment added by another director in which he stated:

Any well qualified auditor, either specialist or belonging to a large audit firm at the end of the day this will be reflected in the audit fees i.e. an auditor who is a specialist or working in a big audit firm will not accept low audit fees, so these indications will be reflected in the audit fees at the end of the day, so I believe that fees is a more reliable way of capturing audit quality in Jordan.

Moreover, one of the audit committee members mentioned that:

We normally pay fees to an audit office not to the auditor in person, and the office accordingly assigns an auditor to take the audit's responsibility. So, when we pay high audit fees to the audit office;

we can ask for a competent and well-qualified auditor to be assigned to audit our company. In addition, more pressure will be put on this assigned auditor to achieved good audit work for our company.

An additional comment made by an audit committee member:

I do not care whether the auditor belongs to Big 4 affiliate or to a big local audit firm. Instead I look to the auditor himself and his ability to offer us good audit quality. From my experience there are auditors in small audit firms who provide audit quality better than those who are working in big audit offices.

The mentioned comments acknowledge the link between audit quality and audit fees. So, as a support to the main proposition of the first model of this thesis, It is reasonable to argue that when an external auditor charges a premium fee to a client this will be associated with the provision of a better quality of service (Palmrose, 1986). This is further supported by Hribar *et al.* (2014) who tried to develop a measure of accounting quality based on audit fees, and concluded that audit fees can be used to provide a reliable measure of a firm's accounting quality. In addition, (Shibano, 1990; Matsumura and Tucker, 1992; Dye, 1993) argued that higher audit effort increases the probability of detected errors implying an adverse correlation between audit effort and financial reports' restatements.

In conclusion, as supported by prior studies from the Jordanian context in particular (Al-Khaddash et al., 2013 and Almomani, 2015) and by perceptions of the majority of respondents as well, the audit fees stay as the main motivation to obtain high audit quality in such an environment. In other words, the amount of audit fees is a better way for audit quality to be differentiated in Jordan, holding all other variables constant

Table 7.4: Responses about the potential indicators of audit quality analysed by respondent groups

Potential indicators of audit quality	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Response percentage and response mean						Response percentage and response mean						Response percentage and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
Audit fees	5.7	11.5	11.5	20.7	50.6	4	5.1	10.1	6.3	41.8	36.7	3.95	6.1	12.1	9.1	33.3	39.4	3.88	3.95
Big 4 affiliates	23	33.3	21.8	13.8	8	2.51	21.5	27.8	27.8	16.5	6.3	2.58	18.2	45.5	21.2	9.1	6.1	2.39	2.52
Firm size	16.1	24.1	28.7	14.9	16.1	2.91	5.1	30.4	34.2	21.5	8.9	2.99	12.1	24.2	33.3	24.2	6.1	2.88	2.93
Industry specialisation	24.1	26.4	26.4	12.6	13.3	2.59	12.7	32.9	31.6	16.5	6.3	2.71	9.1	39.4	27.3	15.2	9.1	2.79	2.66
1-5 are Likert scale intervals: 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree																			

7.4. Boards of directors and audit quality; perceptions of Jordanian boards of directors, audit committees and external auditors

The roles of boards of directors and audit committees are highlighted by the Jordanian regulations and in particular by the Corporate Governance Code as monitoring mechanisms to ensure high audit quality which therefore helps to protect shareholders' interests. The Jordan Securities Commission (JSC) spent time and energy in recent years attempting to improve the role of boards of directors and audit committees to ensure that investors obtain relevant and reliable information (because enhancing investors' confidence in the financial statements and financial market is a significant target for the regulators). The effort of JSC in this vein is culminated in launching a Corporate Governance Code in 2008. This code put many responsibilities on the shoulders of boards of directors and audit committees as corporate governance players.

In terms of boards of directors, the governance code recommends that the board should be effective in carrying out its duties, e.g. authority over management and financial reporting, appropriate composition, diligence, and appropriate knowledge resources. Given the regulators' targets and hopes about the effect of these characteristics/ attributes in strengthening financial reporting and ensuring audit quality; this section examines whether (and to what extent) these characteristics have an impact on audit quality as perceived by board members, audit committee members and external auditors..

This section presents an analysis of the respondents' views with respect to the effectiveness of boards of directors in fulfilling their fiduciary responsibilities relating to the financial reporting process, particularly in audit quality, i.e. showing views of

board members, audit committee members and external auditors about the extent to which boards of directors' effectiveness (boards of directors' functions (authority), composition, diligence and resources) play a role in audit quality (Table 7.5).

The discussion about boards of directors' responsibility will be presented in two parts: their responsibility for a firm's financial system and their responsibility for executive management. First, given that boards of directors have the ultimate responsibility for the functioning of the firm (Jensen, 1993; JCGC, 2008; Achek and Gallali, 2015), organising a firm's financial system, setting effective risk management policies and disclosure policies are expected to protect the firm's value and to ensure that the shareholders receive credible financial statements. This potential connection is also supported by the literature which documented strong evidence of the relationship between sound financial reporting systems organised by the board of directors and audit quality (Knechel *et al.*, 2012). Moreover, the disclosure levels encourage all parties within the companies to take their role seriously, to decrease information asymmetry, to work towards maximising shareholders' interests, and therefore to ensure there is less likelihood of financial statement misrepresentation and more likelihood of high audit quality (Copley, 1992; Lennox, 1999; Goodwin and Seow, 2000; Allini *et al.*, 2016).

Generally and as noted in Table 7.5, all groups of respondents agreed with these relevant statements, i.e. they agree that organising a firm's financial system and the setting of effective risk management policies by boards of directors contribute positively to audit quality in Jordan (the agreement level is above 70% for the three groups with an overall mean of 4.02 out of 5). These findings are consistent with the Jordanian governance code's expectations about the role of these functions on audit

quality, and are also supported by previous survey studies (Nicholson and Newton, 2010; Cohen *et al.*, 2012).

Agency theory points to a high level of disclosure being important and being required from the board as a way to reduce information asymmetry (Allini *et al.*, 2016). However, the perceptions of this disclosure level differ significantly between the directors and external auditors (at 5% level); 67% of auditors agreed about the importance of this statement compared to 53% of directors (there was no significant difference between the perceptions of audit committee members and other board directors).

It can be noted that external auditors value the importance of disclosure more than other groups. This might be because auditors perceive a weak disclosure policy to be an indication of the existence of misbehaviour/breaches and that the management is keen to keep them hidden. Goodwin and Seow (2000) pointed out in their survey that the lack of transparency may lead to or mask management fraud, and also increase their exposure to litigation risk. On the other hand, directors might feel that focusing on a high level of transparency may distract their attention from other important monitoring duties. This view is supported by a survey carried out by Goodwin and Seow (2000) in Singapore. Their survey reported that the directors are reluctant to agree with a high level of disclosure, and they also concluded that over-emphasis on disclosure may curb directors' ability to perform effectively.

Second, as they are at the top of firms, boards of directors are responsible for ensuring that the appointed executive managers have the appropriate competence to carry out their duties, and they should also effectively review and evaluate the performance of

those managers (JCGC, 2008). The respondents in all groups agree with the role of these mechanisms in contributing to better audit quality (63%). In particular, more agreement is reported when boards of directors effectively evaluate executive management's performance (72%). These findings are consistent with the corporate governance and agency theory propositions, which suggest that boards of directors should create closer/more effective monitoring over management to ensure it acts in the best interests of shareholders (Cohen et al., 2004). Adams, Hermalin, and Weisbach (2009) pointed out that effective monitoring of management, by ensuring its efficiency and evaluating its performance, is considered as an indication that a board of directors is vigilant against managerial malfeasance. So, in such cases, management is less likely to behave opportunistically, i.e. curb earning management activities and misrepresentation of financial statements.

Table 7.5: Board of directors activities/attributes and audit quality, perceptions analysed by respondents groups

In your view, to what extent do you believe that the following board of directors' features might contribute to increased audit quality:	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Agreement level (%) and response mean						Agreement level (%) and response mean						Agreement level (%) and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
1. Boards of directors efficiently organise the company's financial affairs.	8	6.9	12.6	23	49.4	3.99	3.8	10.1	10	30.5	45.6	4.04	6.1	6.1	15.2	21.2	51.4	4.06	4.02
2. Boards of directors set the risk management policies to address any types of risk that the company may face.	9.2	5.7	13.8	21.8	49.4	3.97	5.1	8.9	8.9	26.6	50.6	4.09	9.1	6.1	18.2	18.2	48.2	3.91	4.01
3. Boards of directors set a disclosure policy that ensures a high level of transparency.	13.8	12.6	27.6	28.7	17.2	3.23*	7.6	13.9	22.8	29.1	26.6	3.53*	9.1	3	12.1	9.1	66.7	4.21	3.51
4. Boards of directors ensure that the executive managers have the appropriate qualifications and experience needed to carry out their duties effectively.	9.2	8	24.1	40.2	18.4	3.51	5.1	11.4	10.1	46.8	26.4	3.78	6.1	6.1	15.2	27.3	45.5	4	3.70
5. Boards of directors review and evaluate the performance of the company's executive management.	9.2	5.7	12.6	23	49.4	3.98	6.3	7.6	8.9	13.9	63.3	4.20	9.1	3	18.2	9.1	60.6	4.09	4.09
6. Boards of directors acquire credible relevant and timely information from the management.	11.5	9.2	12.6	26.4	40.2	3.75	10.1	10.1	11.4	20.3	48.1	3.86	6.1	9.1	30.3	9.1	45.5	3.79	3.80
7. Boards of directors have adequate knowledge of relevant legislation (e.g. Corporate Governance Code, company law, financial market	14.9	13.8	14.9	21.8	34.5	3.47	20.3	15.2	26.6	8.9	29.1	3.11	9.1	3	45.5	12.1	30.3	3.52	3.34

regulations).																			
8. Boards of directors take necessary procedures to ensure compliance with the relevant regulations in force.	13.8	18.4	20.7	23	24.1	3.25	19	16.5	25.3	16.5	22.8	3.08	6.1	6.1	36.4	18.2	33.3	3.67	3.25
9. Boards of directors comprise 3-13 members.	12.6	36.8	32.2	13.8	4.6	2.61	20.3	29.1	31.6	7.6	11.4	2.61	9.1	30.3	39.4	15.2	6.1	2.79	2.64
10. Boards of directors meet 6 or more times a year.	19.5	29.9	32.2	12.6	5.7	2.55	17.7	27.8	30.4	13.9	10.1	2.71	6.1	29.9	39.7	14.9	6.4	2.91	2.67
11. Boards of directors comprise independent directors.	8	6.9	20.7	23	41.4	3.83	6.3	8.9	13.9	22.8	48.1	3.97	5.9	6.3	21.2	21.2	45.5	3.94	3.80
12. Members of the board do not represent any other companies that run similar businesses.	6.9	10.3	18.4	27.6	36.8	3.59	5.1	10.1	13.9	22.8	48.1	3.99	6.1	3	27.3	21.2	42.4	3.91	3.80
13. The chairman's position is separate from the CEO position.	12.6	17.2	33.3	17.2	19.5	3.14	8.9	22.8	24.1	12.7	31.6	3.35	9.1	12.1	39.4	9.1	30.3	3.39	3.27
14. Directors have not been employed by the company or any of its affiliates during the last three years.	6.9	9.2	21.8	26.4	35.6	3.75	6.3	11.4	12.7	16.5	53.2	3.99	6.1	9.1	18.2	24.2	42.4	3.88	3.81
15. Directors have no relatives who have been employed in an executive position by the company or any of its affiliates during the last three years.	8	8	19.5	28.7	25.6	3.76	6.3	10.1	6.3	26.6	50.6	4.05	6.1	6.1	21.2	24.2	42.4	3.91	3.86
16. Directors have no relationship with the firm's auditors during the last three years.	8	8	21.8	27.6	34.5	3.72	8.9	5.1	10.1	24.1	51.9	4.05	6.1	6.1	24.2	15.2	48.5	3.94	3.86
17. Directors have no business relationship with the firm	6.9	10.3	23	29.9	30	3.66	7.6	7.6	10.1	27.8	46.8	3.99	6.1	6.1	18.2	24.2	45.5	3.97	3.81

(worth more than JOD 50K).																			
18. Directors do not control more than 10% of the company's capital.	8	9.2	23	32.2	27.6	3.62	7.6	7.6	11.4	29.1	44.3	3.95	6.1	6.1	18.2	30.3	39.4	3.91	3.77
19. Board of directors includes female(s).	12.6	41.4	34.5	3.4	8	2.53	13.9	45.6	24.1	6.3	10.1	2.42	12.1	24.2	48.5	12.1	3	2.70	2.56
<p>1-5 are Likert scale interval; 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree</p> <p>* indicates a significant difference from the auditors' group</p> <p># indicates a significant difference from the audit committees' group</p> <p>The significant difference between the three groups of respondents has been analysed using the Kruskal-Wallis test (to find if there is a difference between groups but without indicating between which groups) and a post hoc test to find where the significant difference lies, i.e. between which groups.</p> <p>Same outcome has been confirmed by ANOVA One Way test.</p>																			

Furthermore, the Corporate Governance Code (2008) emphasises the importance of the human, knowledge and information resources of the board. So it recommends that in order to perform its oversight duties effectively; boards of directors (i) should contain three to thirteen members, (ii) should have adequate knowledge of relevant local legislation (e.g. financial market regulations), as well as making sure that the firm is in compliance with this legislation, and (iii) should acquire credible timely information from management. So statements 6-9 in Table 7.5 present perceptions of the respondents about whether these resources help in ensuring high audit quality.

Most of the respondents (66% of directors, 68.4% of audit committee members and 55% of auditors) have agreed about the importance of information resources in audit quality. While most of the auditors agreed about this statement, their agreement is relatively lower than directors. This could be because auditors are less aware of the importance of this resource than directors who are in charge. This result is expected as the relevant information is a key source for board effectiveness: without it directors do not know what is going on in their companies. JCGC (Section 2 para. 9) states that “the company shall provide members of the board of directors with all information and data related to the company, to enable them to perform their duties and to be aware of all aspects related to the company's work”. Thus, this raises the importance of having a good information system in place to make sure that the board obtains the required information.

Effective directors are interested in being in compliance with the law, e.g. governance, financial markets, and are expected to be keen on ensuring high audit quality. However, given the views of the respondents, directors' knowledge of relevant local legislation (e.g. financial market regulations), as well as their actions to make sure

that the firm is in compliance with this legislation, do not obtain strong attention (40%-50% agreement level), suggesting their perceived role in audit quality is less important. This might be because of the weak legal environment in Jordan and the absence of strong litigation risk against directors who do not adhere to the relevant regulations.

With respect to board human resources, i.e. the number of directors on the board, the perceptions of the respondents do not show a significant role for the number of board members (as recommended by Corporate Governance Code, 2008) in achieving high audit quality. It can be noted that around 20% of the respondents agreed about the role of board size and about one third provided a neutral view. Therefore, to obtain more in-depth information, the respondents have been asked about the potential adverse effect of large board size as documented by corporate governance and behavioural literature (Lipton and Lorsch, 1992; Bliss, 2011). As presented in Table 7.7, the directors and audit committee groups significantly agree that a large board size results in higher coordination costs, more time for decision making, and more communication problems. This result also gives more clarification for the inferences obtained in the first model (regression result in table 6.8 showed negative correlation between board size and audit quality).

Therefore, though there is an ambiguity about the effective monitoring advantages derived from board size, this outcome is supported by a number of arguments from prior studies, which reported that a large board size might result in higher coordination costs and a 'free riding' problem (Jensen, 1993), more time for decision making, and more communication problems (Bliss, 2011). Furthermore, Judge and Zeithaml (1999) interviewed 114 board members from four US industry sectors, and

they concluded that board size is negatively related to boards' effectiveness in monitoring.

JCGC (2008) recommends that boards of directors should meet no less than six times per year. Though this recommendation is made by the Jordanian governance code, the frequency of board meetings does not have a clear effect on board monitoring effectiveness. On the one hand, a higher frequency of meetings is considered as a signal of diligence, and fewer meetings indicate a lack of commitment towards shareholders' interests, or indicate insufficient time for effective monitoring of the financial reporting system (Gendron and Bédard, 2010). On the other hand, some studies failed to support this argument (Vafeas, 1999; Abbott et al., 2003). So, the survey's result concerning this attribute (Table 8.5) shows no significant effect, indicating that the respondents think that the number of board meetings does not necessarily translate to effective monitoring over financial reporting and audit quality, i.e. given the views of the sample; it is not a strong indicator of board diligence in Jordan.

This effect of the frequency of board meetings over audit quality, as perceived by the respondents, is not surprising as a number of previous studies have reported consistent findings. Vafeas (1999) indicates that the frequency of board meetings is not necessarily an indication of diligence, it might merely be a routine behaviour, i.e. "form over substance" as suggested by institutional theory. Not all board meetings are beneficial; they may just repeat useless routine tasks (Vafeas, 1999). Furthermore, more meetings may be held if a company is in trouble or has serious problems. In this vein, one of the respondents mentioned (see section 7.7) that the duration of the meetings should be taken into account, not just the number of meetings run per a year.

Statements 11-19 present views of the respondents about board composition that might affect audit quality, for instance the existence of independent directors, role duality and the existence of females on the board. The role of board independence in audit quality is highlighted by JCGC (2008) and is also supported by evidence from previous literature. Statements (10-19) represent independence criteria, as reported in JCGC (2008), which covers independence in term of (i) employment relationships, (ii) family and personal relationships, and (iii) business relationships. As shown in Table 7.5, more than 66% of respondents viewed the independence of directors as a key characteristic of boards in maintaining high audit quality (compared to only about 15% who don't).

Agency theory supports this result as the presence of independent directors enhances boards' ability to monitor management (Young *et al.*, 2008; Allini *et al.*, 2016; Wu *et al.*, 2016) and thus improve audit quality (Cohen *et al.*, 2013). In addition, JCGC (2008) stresses the importance of independent directors in maintaining shareholders' interests and protecting firms' resources. The separation of the chairman and CEO roles did not receive strong agreement as a potential factor in high audit quality (around 40% agreed compared to 30% who did not agree, and about one third gave a neutral view). Finally, it is worthwhile noting that there is no significant difference between the groups regarding these characteristics.

On the other hand, the directors (and audit committee members) are not fully agreed that gender diversity has a positive effect on audit quality (statement 19 in Table 7.5). The more likely reason for this can be captured by the directors' views presented in the next table (Table 7.6). In Table 7.6, "Gender diversity increases conflict in the boardroom especially at times of decision making" is the statement that obtained more

agreement by the respondents (overall mean of 3.68 out of 5). Auditors, on the other hand, do not have a significant level of agreement with all of these statements (about half of auditors gave a neutral view). The difference between the views of directors (and audit committees) and auditors is significant (at level 5%), and this may be explained by auditors having less (or no) actual experience of what is happening inside board meetings than board members.

In more detail, while question 19 in Table 7.5 reflects the respondent's perspectives towards the gender diversity role in audit quality, questions 1-5 in Table 7.6 provide the potential behaviour of women in the boardroom, which in turn generates more insight on how women are perceived to operate. So by merging the views of the respondents about these questions, it can be concluded that more gender diversity among board members creates more conflict, the decision making process consumes more time, and is likely to result in a less effective board. Other potential behaviours for women on the board (statements 1-4) are rated insignificant in the Jordanian environment. This conclusion supports the result of the first model (that showed negative relationship between gender diversity and audit quality) (see results in table 6.6), and also confirmed by Lau and Murnighan (1998) and Campbell and Mínguez-Vera (2008) who found that gender diversity on the board adversely affects its effectiveness.

Given that the literature failed to provide consistent insights about the role of gender diversity in board effectiveness (Nielsen and Huse, 2010, Hambrick et al., 1996; Rose, 2007), a number of studies reported that the existence of women negatively affects board performance, and supported the idea that gender diversity may slow down the decision making process and make reaching a consensus harder (Hambrick et al.,

1996; Rose, 2007), the coordination more difficult and costly (Ancona and Caldwell, 1992), and hamper board efficiency (Brunzell Eva Liljeblom, 2014). Furthermore, this result is in line with the finding of the recent survey carried out by Brunzell Eva Liljeblom (2014). By eliciting perceptions of the chairmen of 780 Nordic companies, they found that the chairmen are significantly less satisfied with female board members as compared to male ones.

Table 7.6: Potential gender diversity effect on boards of directors; perceptions analysed by respondents' groups

Regarding gender diversity in the board, to what extent do you agree about the following statements:	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Agreement level (%) and response mean						Agreement level (%) and response mean						Agreement level (%) and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
1. Women are committed to the attendance of board meetings more than men.	8	43.7	34.5	10.3	3.4	2.57	12.7	49.4	17.7	12.7	7.6	2.53	6.1	39.4	36.4	12.1	6.1	2.73	2.58
2. Women are more conservative in their decisions than men.	7.5	47.1	31	11.5	2.9	2.53	12.7	39.2	26.6	10.1	11.4	2.68	6.1	21.2	54.5	18.2	0	2.85	2.64
3. Over-conservativeness by women results in a counterproductive result for the firm.	10.3	35.6	41.4	10.3	2.3	2.59	16.5	34.2	32.9	8.9	7.6	2.57	9.1	21.2	60.6	3	6.1	2.76	2.61
4. Women on the board ask for more audit work compared to men.	10.6	34.5	41.4	11.5	2	2.61	10.1	36.7	30.4	7.6	15.2	2.81	6.1	36.4	45.5	9.1	3	2.67	2.70
5. Women on the board results in a higher level of conflict.	5.7	13.8	23	21.8	35.6	3.68*	10.1	7.6	12.7	26.6	43	3.85*	9.1	9.1	30.3	45.5	6.1	3.3	3.68
1-5 are Likert scale interval; 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree * indicates a significant difference from the auditors’ group (using Kruskal-Wallis test) # indicates a significant difference from the audit committees’ group. Consistent outcome has been presented by ANOVA One Way test.																			

Table 7.7: Potential effect of large board size, perceptions analysed by respondents' groups

Regarding board size, to what extent do you agree about the following statements:	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Agreement level (%) and response mean						Agreement level (%) and response mean						Agreement level (%) and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
1. Large board size results in higher coordination costs.	8	8	19.5	27.6	36.8	3.77	6.3	7.6	8.9	31.6	45.6	4.03	0	12.1	33.3	42.4	12.1	3.55	3.83
2. Large board size results in more time for decision making.	5.7	6.9	26.4	26.4	34.5	3.77	7.6	6.3	10.1	35.4	40.5	3.95	6.1	9.1	51.5	27.3	6.1	3.18	3.74
3. Large board size results in more communication problems.	5.7	8	24.1	27.6	34.5	3.81	7.6	5.1	13.9	40.4	43	3.96	6.1	6.1	51.5	30.3	6.1	3.24	3.76
4. Large board size is ineffective in monitoring management.	8	12.6	43.7	25.3	10.3	3.17	10.1	8.9	25.3	39.2	16.5	3.43	3	24.2	45.5	21.2	6.1	3.03	3.25
1-5 are Likert scale interval; 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree * indicates a significant difference from the auditors’ group (using Kruskal-Wallis test) # indicates a significant difference from the audit committees’ group Consistent outcome has been revealed by ANOVA One Way test as well.																			

7.5. Audit committees and audit quality: perceptions of auditors, boards of directors and audit committee members

The central mission of audit committees is strengthening the quality of financial information and therefore boosts investor confidence in financial reporting and the financial market in general. This section presents an analysis of the respondents' views about the role of the audit committee (considering its activities as suggested by JCGC, 2008) in ensuring high audit quality as one of the most important tasks within their responsibilities. In particular, analysing the views of board members, audit committee members and external auditors about the extent to which audit committee effectiveness (through audit committees' function, composition, diligence and resources) plays a role in audit quality. Little is known about function and resources in the literature (may use this in the conclusion).

Statements 1-8 in Table 7.8 shows that most of the directors, including audit committee members, and external auditors believe that most of the audit committee functions (review and approve significant accounting policies, the internal control system, review and approve appointments, re-appointment and removal of external auditors, review of annual and interim financial statements, review the independence of external auditors, and review and approves fees for audit and non-audit services) have a positive effect on audit quality.

The Jordanian Governance Code (2008) states that audit committees should be responsible for monitoring financial reporting, e.g. reviewing accounting policies, reviewing financial reports, internal control and the external auditing process. First, statements 1 and 3 Table 7.8 aim to examine the views of respondents about the

extent to which reviewing and approving accounting policies and financial statements by audit committees affects audit quality. The perceptions of respondents from the three groups (above 70% agreement) highlighted the importance of these functions in increasing audit quality. These positive views of respondents are in harmony with the notion that effective monitoring over financial reporting issues prevents an entity from misstatements and fraud occurrence (Beasley et al., 2009), and thereby ensures high audit quality. On the other hand, ineffective audit committee oversight increases the likelihood that management will behave opportunistically (e.g. manage earnings to obtain private benefits) when it has incentives to do this, and also decreases auditors' motivation to broaden their audit scope and produce high audit quality.

Second, statements 2 and 4 in Table 7.8 aim to examine the views of respondents about the extent that reviewing and approving internal control and risk management systems by audit committees affects audit quality. The perceptions of respondents regarding monitoring of internal control systems and audit quality obtained high agreement from the three groups (70%, with overall response mean 4). In that sense, this result is in line with the idea that effective internal control ensures effectiveness of the work functions throughout firms and therefore prevents a firm from earnings management (Jordan CGC, 2008; Cohen et al. (2004). So, monitoring and reviewing of the internal control system regularly by audit committees enriches their understanding of a firm's operations and increases the chance of discovering misstatements or earnings management acts. In addition, they might gain greater understanding of the company's business and operations (Bishop et al., 2000), and therefore ensure credible financial statements. On the other hand, it can be noticed that auditors provided greater recognition of the importance of reviewing risk

management systems by audit committees (72%) as auditors might benefit from this by the reduction of audit risk accordingly (Turley and Zaman, 2004).

Third, one of the essential responsibilities of the audit committees – as recommended by Jordanian governance regulation – is overseeing the external audit function, including the appointment, re-appointment, removal, compensation and maintenance of the independence of external auditors. So, regarding the function of audit committees in reviewing and approving the appointment, re-appointment, and removal of external auditors, it can be noted (statement 8, Table 7.8) that most of the audit committee members (76%) agreed with the statement that reviewing and approving the appointment, re-appointment, and removal of external auditors by audit committees contributes to audit quality. This is consistent with the outcomes of prior studies that effective audit committee oversight, especially over auditor appointment, is expected to strengthen audit quality (Gendron and Bédard, 2010; Carcello et al., 2002)

Furthermore, effective audit committees should be very interested in maintaining auditor independence to protect shareholders' interests at the end (JCGC, 2008; Cohen, 2002). Also auditor independence is required in order to assure audit quality by keeping the auditors away from management pressure (Firth, 1997). In this vein, the respondents (directors including audit committee members) believe in the importance of this attribute (this is consistent with the previous discussion about audit quality attributes –section 7.3) in delivering high audit quality (i.e. audit work free from subjectivity and bias), and also they believe in the importance of audit committees reviewing and approving the types and fees of non-audit services as a way of ensuring auditor independence. This is supported by the argument that non-audit

services increase the economic bond between auditors and clients, impairs auditors' independence and thereby negatively affects audit quality (Basiruddin, 2011; Santos *et al.*, 2016).

However, though the views of directors and audit committee members are quite similar, there is a significant difference (at level 5%) from auditors' perceptions. So, the importance of these functions in auditors' responses is insignificant, suggesting that they do not pay much attention to these functions (only about one third of external auditors agreed with these audit committee's functions). Similar findings were found regarding the statement that the audit committee should review auditor independence, and review and approve audit fees. The most likely reason for this is that external auditors may have concerns about being threatened by the audit committee authority, and/or auditors might not fully agree with the notion that providing non-audit services could increase their economic dependence on the client and therefore impair their independence, as suggested by the local governance code. Pornupatham (2006) reported from his survey that auditors work towards securing their monetary revenue with no or fewer controls from the audit committee. Furthermore, two respondents from the auditors group mentioned that they do not believe that providing non-audit services affects auditors' independence (see part 7.7).

Table 7.8: Audit committee activities/attributes and audit quality, perceptions analysed by respondent groups

In your view, to what extent do you believe that the following audit committee (AC) features might contribute to an increase in audit quality:	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Agreement level (%) and response mean						Agreement level (%) and response mean						Agreement level (%) and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
1. AC reviews and approves significant accounting policies of the firm.	9.2	10.3	9.2	19.5	51.7	3.94	8.9	8.9	3.8	29.1	49.4	4.01	6.1	6.1	15.2	12.1	60.6	4.15	4
2. AC monitors and reviews internal control systems.	8	10.3	11.5	21.8	48.3	3.92	7.6	7.6	5.1	25.3	54.4	4.11	9	3	9.1	24.2	54.5	4.12	4
3. AC reviews and approves a company's financial statements.	9.2	9.2	17.2	21.8	42.5	3.79	8.9	7.6	10.1	26.6	46.8	3.95	9	2	10	24	56	4.12	3.90
4. AC monitors and reviews financial risk management systems.	12.6	16.1	26.4	23.	21.8	3.25	8.9	12.7	11.4	24.1	43	3.80	6.1	9.1	12.1	21.2	51.5	4.03	3.60
5. AC reviews the independence of the external auditor.	9.2	8	14.9	20.7	47.1	3.89*	6.3	10.1	5	24.1	45.1	4.10*	15.2	15.2	33.3	21.2	15.2	3.06	3.83
6. AC reviews and approves audit fees.	9.2	9.2	16.1	24.1	41.4	3.79*	7.6	7.6	5.1	26.6	53.2	4.10*	12.1	15.2	36.4	27.3	9.1	3.06	3.79
7. AC reviews and approves types and fees of non-audit service by external auditor.	10.3	8	16.1	23	42.5	3.79*	5	10.1	6.3	20.3	58.2	4.16*	9.1	18.2	36.4	27.3	9.1	3.09	3.82
8. AC reviews and approves the appointment, reappointment and removal of the external auditor.	9.2	9.2	9	25.3	41.4	3.92	5	11.4	7.6	22.8	53.2	4.08	21.2	12	14.1	28	25	3.27	3.75
9. Audit committee includes a member who has relevant financial experience.	9.2	10.3	16.1	23	41.4	3.77	6.3	8.9	7.6	24.1	53.2	4.09	6	6	15	33	40	3.94	3.92
10. AC is composed of independent nonexecutive directors	6.9	10.3	13.8	25.3	43.7	3.89	6.3	7.6	6.3	21.5	58.2	4.18	9	3	15.2	21.2	51.5	4.03	4.03
11. AC comprised of 3 or more members.	13.8	14.9	40.2	18.4	12.6	3.01	12.7	21.5	30.4	20.3	15.2	3.04	12	6	30	43	9	3.30	3.07
12. AC acquires credible timely information from the management to	9.2	9.2	28.7	24.1	28.7	3.54	7.6	11.4	16.5	25.3	39.2	3.77	10	5	24	45	15.2	3.52	3.63

achieve its duty effectively.																			
13. AC acquires enough monetary resources from the firm to achieve its duty Effectively.	8	9.2	26.4	24.1	32.2	3.63	6.3	10.1	17.7	27.8	38	3.81	9	6	24	19	12	3.48	3.68
14. AC meets 4 or more times a year.	11.5	18.4	44.8	13.8	11.5	2.95	12.7	26.7	35.4	12.7	12.7	2.86	12.1	6.1	42.4	36.4	3	3.12	2.94
<p>1-5 are Likert scale interval; 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree</p> <p>* indicates a significant difference from the auditors' group</p> <p># indicates a significant difference from the audit committees' group</p> <p>The significant difference between the three groups of respondents has been analysed using the Kruskal-Wallis test (to find if there is a difference between groups but without indicating between which groups) and a post hoc test to find where the significant difference lies, i.e. between which groups.</p> <p>Consistent outcome has been revealed by ANOVA One Way test.</p>																			

The Jordanian Corporate Governance Code (2008) emphasises the importance of audit committee composition, e.g. independence and financial experience. Independence, as the most important characteristic, often increases audit committee effectiveness (Gendron and Bédard, 2010), and effectiveness in turn enhances audit committees' ability to oversee and ensure the quality of auditing (Cohen et al., 2008). The views of the respondents about the importance of this attribute in audit quality in the Jordanian market have been investigated in Table 7.8. The overall finding indicates that above 70% (with an overall mean score of 4.03) of all three groups of respondents agreed with the statement that audit committee independence contributes to higher audit quality, i.e. the presence of independent directors is less likely to be associated with misleading financial statements. This finding is consistent with most of the literature which showed the correlation between audit committee independence and credible audit quality (Carcello et al., 2002, Kamil and Elkhatib, 2013; Beattie et al., 2014). Zaman et al., (2011) stated that in order to avoid legal liability and to protect their reputation, audit committees should promote and maintain auditor independence, as well as effectively monitoring the auditing process by demanding a broader audit scope.

The views of respondents regarding the existence of audit committees' members who have financial expertise shows that all groups are strongly in favour of this audit committee attribute. This result is consistent with the argument that audit committees with more financial experience are better in understanding and appreciating external audit work, supporting external auditors and solving the disputes which may arise between auditor and management (DeZoort and Salterio, 2001). Results also show that there is no significant difference between the views of the three groups regarding audit committee composition (independence and financial expertise).

The local governance code (2008) recommends that the firms should put at the disposal of the audit committee all required facilities that it may need to perform its oversight duties effectively, including the authority to seek expert assistance whenever needed. Statements 12 and 13 present the extent to which audit committee resources (information and monetary resources) are important for audit quality.

Credible, relevant and timely information is important as it helps an audit committee in conducting effective monitoring (SEC, 2003; JCGC, 2008). It is clear here that audit committee members gave more attention to these questions (67%). While most of the other directors and auditors agreed about the importance of these resources, their agreement is less (but not significantly less) than audit committees. This is likely to be because audit committee members who are in charge feel the importance of these resources due to their experience. These responses are consistent with the idea that management should provide audit committees with appropriate funding to pay any outside advisers, and ordinary administrative expenses of the audit committee that are necessary or appropriate in carrying out its duties. As discussed before, audit committee independence, and therefore effectiveness, might be compromised when the audit committee is dependent on management's discretion to pay its relevant expenses and to pay outsourced consultations, especially when a conflict of interest with management is in place (Gendron and Bédard, 2010).

Furthermore, while there is overall agreement on the role of audit committee size on audit quality, respondents do not feel strongly about this, i.e. it has obtained less attention than other characteristics. The effect of audit committee size (and the size of boards of director as discussed earlier) has no clear effect on board performance and previous empirical studies provide mixed and inconsistent results. Thus, though audit

committee size received more attention from regulators, as large size makes the audit committee more effective in fulfilling its monitoring role (Zaman et al., 2011), on the other hand, some of the literature stresses that the costs that stem from poor communication and coordination is likely to outweigh the benefits of additional members (O'Sullivan, 1999; Hackman, 1990). In conclusion, given the questionnaire responses, the monitoring role and committee size in Jordan seems not to have a positive relationship.

In terms of diligence, audit committees should meet four times at least per year, as recommended by JCGC (2008). The findings about audit committees' frequency of meetings show no significant effect, indicating that the number of meetings seems not to be a relevant indication of audit committee diligence (effectiveness). Instead, the respondents might believe that the number of meetings does not necessarily translate to effective monitoring over financial reporting and audit quality. This result could be explained by the institutional theory which proposes a firm may comply with the corporate governance practices just to simulate other firms, or to meet the regulations without substantial impact on these governance practices (Cohen et al., 2008). Therefore, the frequency of meetings may not necessary indicate diligence, it might be just to simulate other firms or to meet the code recommendations. Moreover, Gendron and Bédard (2010) pointed out that more frequent meetings may be seen as an indication of the existence of problems/weaknesses in the internal control system.

7.5.1. Interaction of the audit committee with external auditors

The Jordan Corporate Governance Code (2008) recommends that audit committee members should be in contact with external auditors on a regular basis to be updated about all issues that are related to auditing work. This indicates the importance of the communication between these parties in reducing misstatements and producing high audit quality. So this section examines the extent to which the communication between both parties contributes to audit quality, based on the respondents' perceptions.

Table 7.9 analyses the views of the respondents on communication between audit committees and external auditors. Almost two thirds of board of director respondents (67%) agreed that the audit committee should communicate with the external auditor on all key issues associated with the audit. Audit committee members and auditors gave a higher agreement for this statement (80%). This is likely to be due to the fact that audit committee members and auditors feel the actual importance of having a regular meeting together. Pornupatham (2006) commented that regular meetings between the auditor and the audit committee reduces information asymmetry between them and facilitates detection of earnings management, and therefore ensures high audit quality. Audit committee meetings with the auditor without management presence also obtained high agreement from all respondents, indicating such meetings are worthwhile. The Kruskal-Wallis test shows that the difference is not significant; all groups gave a high rate for these activities as important scenarios for high audit quality.

Moreover, most board members and audit committee members paid more attention to the importance of reviewing and approving an audit's scope and the plan of the

external auditors (67-80% agreement and mean 3.76-4.11 out of 5). However, only 37% of external auditors agreed with these statements, implying that they perceived these activities added no value to audit quality. Possible explanations for such a result may be because auditors are not fully happy in sharing their audit scope and plan with anybody as a matter of privacy, or perhaps auditors have a concern that their plan and control procedures are not compatible with what an audit committee needs, which therefore create problems between them. Pornupatham (2006) summarised in his survey that auditors do not like to share their audit plan with the audit committee as committee members may come from differing backgrounds and experience, and sometimes do not have financial/accounting experience and this therefore create difficulties since audit work contains audit terms and concepts that might require specific knowledge to be understood.

In relation to whether informal interaction between an audit committee and external auditors has a positive effect on audit quality, above 74% of audit committees and auditors have highlighted the importance of this type of interaction. This result is in line with previous studies that stress the importance of informal interactions and communications between these parties (Gendron and Bédard 2006; Turley and Zaman 2007. Turley and Zaman (2007) concluded in their survey that informal meetings between audit committee and external auditors assist in encouraging a productive climate that is conducive to raising concerns informally and “bouncing off” matters of interest.

On the other hand, less than one third of directors (who are outside audit committee) gave importance to this informal channel of interaction. The most likely reason for

this is that directors have a concern that this informal relationship may compromise auditors' independence (especially in a small community like Jordan).

Overall, analysis of this section reveals that communications channels and interaction should be available between audit committee and external auditors in order to facilitate the audit process and therefore contribute to audit quality. As mentioned earlier, the governance regulation in Jordan emphasised the importance of such interactions and highlighted their importance on audit quality. However, given that this governance regulation is not compulsory so far in Jordan, most of the companies are not active in arranging and facilitating such communications. This therefore required further steps from regulatory bodies in such areas. Also, further steps should be taken to protect auditors' independence even if they create a long term informal relationship with audit committees.

7.5.2. Experience of audit committee members

As audit committees are responsible for ensuring the integrity of financial reports, JCGC recommends that they should have sufficient knowledge and experience for their role; in particular one member should have financial expertise. Through the importance of financial expertise, this part moves beyond this kind of competence and extending the analysis to other kinds of competencies that are expected to play a role in increasing audit quality, i.e. do audit committee directors with financial, external audit, internal audit, legal or business operations experience bring benefits to the quality of audit? DeZoort and Salterio (2001) documented that different

experience/knowledge of audit committee members leads to differences in their judgements and their relations with auditors.

It can be clearly noted from Table 7.10 that respondents from all groups have strongly supported the importance of these experiences. This suggests that experience in finance, accounting, external and internal audit and business operations is crucial for supporting the audit committee monitoring role. DeZoort and Salterio (2001) revealed in their survey that audit committee members who have audit knowledge are associated positively through their ability to support the auditor in a dispute with client management. Further, an audit committee's auditing experience strengthens the internal control system (DeZoort, 1998). He found in his survey that audit committee members who have external audit experience make internal control judgments more consistent with those of external auditors than members who do not have this experience.

Business operation experience also obtained greater recognition by the majority of respondents (response mean 4.24). This result is consistent with the notion that business and detailed operation expertise (i.e. firm-specific knowledge) may help audit committee members in fostering their monitoring competencies. Thus, this knowledge of business operation makes the directors more effective at overseeing the firm's financial reporting process (Gendron and Bédard, 2010).

Legal experience of audit committee also obtained much attention. Though its importance has rated relatively lower than other types of experience, it can be concluded that most of the respondents (response mean 3.64) have agreed on the importance of this experience. This result is consistent with previous empirical studies

that documented the importance of audit committee's legal experience in increasing the integrity of financial statements. Krishnan et al., (2011) reported that a legal background for audit committee members makes them more vigilant about legal risks that are associated with inadequate, inaccurate or aggressive financial reporting, and therefore can help in ensuring audit quality. Furthermore, such members can provide a fruitful support in some accounting transactions that have legal implications, e.g., mergers and acquisitions.

On the other hand, a couple of comments have been added by directors regarding this question. One of them is a concern that the emphasis on financial experience is at the expense of other important experiences. He stated:

Being the current code (Corporate Governance Code, 2008) focuses on financial experience only, this might negatively affect the diversified abilities of audit committees' members. Including members who have different types of experience could greatly improve skills of the team (audit committee).

Another director also wrote:

I would say that a combination of financial, accounting, auditing, and business operation experience will build a strong and effective committee and thus definitely leaves impact on audit quality.

It can be seen that these comments, in addition to responses in Table 7.10, indicate the importance of combinations of more than one kind of experience. As current regulations pay much attention to financial expertise, these results may have implications for future governance reform i.e. take into consideration a balanced portfolio of skills on the audit committee.

Table 7.9: Audit committee interaction with external auditor and potential effect on audit quality, perceptions analysed by respondent groups

In your view, would interactions between the external auditor and the audit committee increase audit quality if:	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Agreement level (%) and response mean						Agreement level (%) and response mean						Agreement level (%) and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
1. AC communicates with the external auditor on all key issues associated with the audit.	6.9	11.5	13.8	27.6	40.2	3.83	7.6	8.9	3.8	32.9	46.8	4.03	3	9.1	9.1	42.4	36.4	4	3.93
2. AC discusses and approves the scope of the audit plan with external auditors.	5.7	10.3	14.9	31	37.9	3.85*	10.1	5.1	7.6	29.1	48.1	4*	12.1	24.2	27.3	21.2	15.2	3.03	3.77
3. AC approves the external auditor’s evaluation of control procedures.	6.9	10.3	16.1	33.3	33.3	3.76	8.9	5.1	5.1	27.8	53.2	4.11	9.1	18.2	33.3	15.2	24.2	3.27	3.82
4. AC meets with external auditor without a management presence in order to discuss audit issues.	5.7	10.3	16.1	33.3	34.5	3.80	6.3	6.3	7.6	27.8	51.9	4.13	9.1	9.1	24.2	33.3	24.2	3.55	3.89
5. AC members have an informal channel of communication with the auditor	6.1	27.6	28.7	17.2	10.3	2.80*#	8.9	6.3	7.6	24.1	53.2	4.06	12.1	6	9.2	33.3	39.4	3.82	3.46
1-5 are Likert scale interval; 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree * indicates a significant difference from the auditors’ group # indicates a significant difference from the audit committees’ group The significant difference between the three groups of respondents has been analysed using the Kruskal-Wallis test (to find if there is a difference but without indicating between which groups) and a post hoc test to find where the significant difference lies, i.e. between which groups.																			

Table 7.10: Effect of different types of experience on audit quality, perceptions analysed by respondent groups

In your view, is an audit committee more effective when it is composed of members who have knowledge and experience in:	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Agreement level (%) and response mean						Agreement level (%) and response mean						Agreement level (%) and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
Finance	2.3	6.9	19.5	41.4	29.9	3.9	0	7.6	6.3	20.3	65	4.41	0	3	9.1	48.5	39.4	4.24	4.16
Accounting	3.4	5.7	17.2	37.9	35.6	3.97	0	7.6	6.3	20.3	65	4.43	0	3	12.1	48.5	36.4	4.18	4.19
External audit	2.3	5.7	8	8	76	4.49	1.3	3.8	4	17.7	73.4	4.58	0	3	3	21.2	72.7	4.64	4.55
Internal audit	3.4	8	17.2	35.6	35.6	3.92	1.3	5.1	10.1	13.9	69.6	4.46	0	3	15.2	21.2	60.6	4.39	4.21
Legislation (legal experience)	2.3	16.1	22	33.3	26	3.64	12.7	11.4	16.5	17.7	41.8	3.65	6.1	6.1	36.4	24.2	27.3	3.61	3.64
Business operation	3.4	8	10.3	24.1	54	4.17	0	9	2.6	20.5	67.1	4.47	0	15.2	24.2	18.2	42.4	3.88	4.24
1-5 are Likert scale interval; 1= Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5= Strongly agree * indicates a significant difference from the auditors’ group # indicates a significant difference from the audit committees’ group																			

7.6. Ownership identity and audit quality: perceptions of auditors, boards of directors and audit committee members

The second research question seeks the views of directors, audit committee members and external auditors about whether different identities of owners have an effect upon audit quality in the Jordanian market. There is a paucity of knowledge about the perceived role of different ownership identities in ensuring credible auditing, given that previous studies have been primarily based on annual reports' disclosures to examine the effect of ownership structure on audit quality³⁹.

Family ownership, financial institutions (banks), non-financial institutions, government and foreign investors (Arab and non-Arab) are common shareholders in the Jordanian market. Given that different types of owners have different investment policies and different degrees of motivations and abilities to exert effective monitoring over financial reporting (Lim *et al.*, 2014), Table 7.11 analyses perceptions of the respondents about whether these six ownership types have an effect on audit quality.

Family ownership obtained high agreement from the three groups (overall response mean 3.75) regarding the role of this ownership type in audit quality. This result is consistent with the notion that agency conflict is lower with family shareholders because they are more interested in maintaining the long-term value of firms, as well as their reputations, and consequently are less likely to behave adversely. In that sense, this is also supported by the comments that have been mentioned by respondents regarding family ownership structures, which generally focus on the fact that family

³⁹ After a careful reviewing of the literature, it can be said that this is the first study that examines effect of ownership on audit quality from perceptual viewpoints.

owners favour integrity of financial statements and they are less likely to allow any misrepresentation. One of the comments was, “family members are carefully looking after their reputation so they are keen on audit quality, because any material fraud may negatively affect their business and this also creates a concern of gloating by other competitors”. Another director also said, “Most families that control business are well known in society and therefore they try to maintain their social status”.

Table 7.11 shows also that most of the respondents gave greater recognition to the importance of bank ownership identity in promoting audit quality (overall mean 3.6). The views of those respondents are in line with literature discussion about the positive role of banks in ensuring high audit quality (Morck *et al.* (2000); Tian, 2004). These studies reported that banks have the incentives and power to monitor financial reporting and penalise managers who report low earning quality, and therefore they are more interested in higher audit quality. Moreover, though the perceived role of non-financial institutions in audit quality obtained importance from all groups, it can be noted that it is less than that of banks. This result seems expected, given that the bank sector in Jordan is more developed and organised, and also, as concluded by (Matar and Noor, 2007), banks in Jordan are more committed to a corporate governance code compared to other sectors.

Comments about institutional investment also highlight the importance of financial institutions in promoting audit quality as well-structured owners, more conservative in decision making, and they are more interested in their investment and therefore they exert effective monitoring over management. One of the comments was, “members who represent banks are relatively more vigilant and the quality of financial statements is a very sensitive issue for them”. Another comment was, “banks’

regulations are very strict due to the role played by the Central Bank, and this in turn is reflected in the behaviour of the directors on the board”.

Respondents also highlighted the role of government ownership in promoting audit quality. This finding is supported by literature (Faccio *et al.*, 2006) that pointed out that government representatives are more interested in demanding high quality audit in order to protect firms’ assets, maintain their reputation or to raise capital. Moreover, this result is expected, as the behaviour of government representatives in the listed Jordanian firms is likely to be consistent with the overall government strategy regarding attracting investments, and then they are most likely to demand high-quality audit to maintain firms’ values and provide positive signals for potential investors.

On the other hand, the comments mentioned by respondents about government ownership are focused on government investment being a strategic investment in important public companies like Phosphate and Potash, so therefore they are under strict monitoring procedures by the Audit Bureau, which audits companies the government is investing in. Also, the behaviour of government representatives is expected to be consistent with the overall government strategy regarding attracting investment, and then they most likely demand high audit quality to maintain firms’ value and provide positive signals for investors. Thus, members who represent these investments are expected to be more interested in the integrity of financial statements. One mentioned that, “government investment is considered as a national strategic matter and government representatives are working under effective monitoring, especially by the Audit Bureau”.

Investors from Arab countries are prevalent in the Jordanian market. As an answer for the question of whether this type of shareholder has an effect on audit quality, most of the respondents from all groups agreed upon this (overall mean 3.49). The same result was also reported with respect to another type of foreigner (non-Arab shareholders), indicating that there is a perceived role for foreign ownership in ensuring audit quality. This result is supported by previous studies (Ben Nasr et al., 2015; He *et al.* (2013) and is also consistent with the notion that foreigners with substantial ownership put more pressure on management to improve corporate governance and increase corporate transparency in particular, which therefore reduces information asymmetries (Jiang and Kim, 2004). On the other hand, the reported comments from respondents about foreign owners are focusing in particular on foreign owners being very interested in their profitability and the value of their investment, and consequently a credible audit is expected.

Overall, it can be concluded that all ownership types in Jordan play a positive role in increasing audit quality, given the perceptions of audit committee members, other board members and external auditors. These positive perceptions, obtained from respondents, have a potential impact on the behaviour of investors and reduce their concern that large shareholders may exploit corporate assets. The Kruskal-Wallis test showed no significant differences between the three groups, indicating consistent perceptions regarding this question.

The conclusion of this section is consistent with the argument that large capital providers have a significant role in monitoring and controlling managers' decisions because of their ownership volume, and because they are better informed than individual investors, due to the analytical and information processing resources at

their disposal (Jensen, 1993; Mitra and Cready, 2005; Khan *et al.*, 2011). The important monitoring role of large shareholders is more important in developing countries, as a means of governance by which shareholders can protect their rights and effectively control the company and the management (Jensen and Meckling, 1976; Shleifer and Vishny, 1997, 1986; Dharwadkar *et al.*, 2000). Fan and Wong (2005) also concluded in their study that the existence of large shareholders in developing countries is associated with demanding more credible audit, because they are keen to employ high quality monitoring and bonding mechanisms to assure other shareholders that their interests are protected and to boost their confidence. These positive perceptions obtained from respondents have a potential impact on the behaviour of investors and reduce their concerns that large shareholders may behave opportunistically and exploit corporate assets.

Table 7.11: Ownership types and audit quality, perceptions of respondents analysed by respondents groups

In your view, to what extent do you believe that the following ownership types might contribute to an increase in audit quality:	Boards of directors (n=87)						Audit committee members (n=79)						External auditors (n=33)						Overall mean
	Agreement level (%) and response mean						Agreement level (%) and response mean						Agreement level (%) and response mean						
	1	2	3	4	5	Mean	1	2	3	4	5	Mean	1	2	3	4	5	Mean	
Family ownership	6.9	11.5	8	35.6	37.9	3.86	6.3	12.7	11.4	41.8	27.8	3.72	6.1	24.2	9.1	30.3	30.3	3.55	3.75
Financial institutions	6.9	10.3	20.7	39.1	23	3.61	5.1	12.7	21.5	40.5	20.3	3.58	3	18.2	12.1	45.5	21.2	3.64	3.60
Non- financial institutions	7.2	11.5	26	43.7	11.5	3.41	3.8	12.7	29.1	39.2	15.2	3.49	9.1	15.2	21.2	42.4	12.1	3.33	3.43
Government	11.5	17.2	21.8	29.9	19.5	3.29	13.9	10.1	17.7	40.5	17.7	3.38	12.1	12.1	15.2	42.4	18.2	3.42	3.35
Arab-foreigners	6.9	11.5	19.5	43.7	18.4	3.55	6.3	17.7	20.3	41.8	13.9	3.39	3	18.2	21.2	33.3	24.2	3.58	3.49
Non-Arab foreigners	5.7	12.6	23	37.9	20.7	3.55	5.1	16.5	22.8	41.8	13.9	3.43	6.1	18.2	18.2	30.3	27.3	3.55	3.50
1-5 are Likert scale interval; 1=Strongly disagree; 2= Disagree; 3= No view; 4= Agree; 5=Strongly agree																			
* indicates a significant difference from auditors’ group																			
# indicates a significant difference from audit committee’ group																			

7.7. Suggested improvement to the current governance regulation in Jordan

A number of prior studies argued that while meeting or adhering to the regulatory requirements is important, it is not sufficient to guarantee effectiveness (Martinov- Bennie, 2007; Contessotto and Moroney, 2013). A number of survey studies identified numerous indicators of boards of directors' and audit committees' effectiveness not captured in regulation (Gendron and Bédard, 2006; Turley and Zaman, 2007; Cohen *et al.*, 2013). Furthermore, the Jordanian governance code was initiated in 2008, indicating that the code still in its infancy and the governance regulation is still evolving. So, these points motivated this study to look beyond the current governance recommendations in order to gain a complete understanding of the characteristics that determine board of directors' and audit committees' effectiveness⁴⁰ and, in turn, have an effect on audit quality.

Consequently, this is achieved by asking the respondents about their suggestions for possible improvements/changes they would make to the current Corporate Governance Code (2008). More precisely, the improvements that related to boards of directors and audit committees which respondents believe are important to audit quality. It is worth to say in this vein that these targeted respondents have a consultative role in the formation of relevant regulations in Jordan.

⁴⁰ Based on the result of their survey study, Contessotto and Moroney (2013) pointed out that adoption of regulated best practices does not necessarily ensure audit committee effectiveness; it is important to look beyond regulated requirements.

As a result, the respondents⁴¹ made different recommendations in this vein. The areas they most focused on were: audit committee tenure, internal control systems, non-audit services, board dynamics, training and length of meetings.

Based on the Jordanian regulatory framework, it is not allowed for the external auditors to most of non-audit services at the same time while they statutory audit work. According to the organising external audit profession (2006), in order to maintain auditors' independence, it is not allowed for an external audit provider to offer contemporaneously any other services such as a bookkeeping service, liquidation consultations' service or design internal control system. However, some services are allowed, such as an IT service, or feasibility study service.

Loosening (relaxing) regulations about non-audit services is one of the important suggestions made by auditors for consideration in any future amendments of the Corporate Governance Code. One of them stated that:

I do not believe that providing non-audit services in addition to the statutory audit for the same client actually affects auditor independence. Instead, it gives us (the auditors) more knowledge about the nature of clients' businesses and thus contributes positively to the audit process and audit quality. So, we are looking for the relevant regulatory bodies to take this into consideration.

Another auditor wrote:

I would prefer it if the regulation related to non-audit services is changed because I do not believe in the alleged tie between providing consultations to a client and auditor independence. I believe that there is no tie whatsoever (between providing non-audit service and auditor independence).

⁴¹ Some respondents, not all of them provided suggestions.

There is evidence from the previous empirical studies supporting this idea and reporting a so-called knowledge spillover advantage through providing non-audit services. Antle *et al.* (2006), Arruñada (1999) and Simunic (1984) argued that the knowledge spillover happens because the same set of information is used in achieving those type of services, and the results in one service have a favourable effect on the other. For instance, an auditor who evaluates the internal control system, as part of his usual duty, has a better knowledge with which to advise on or improve the internal control system than another service provider. Also, other previous studies reported no relationship between providing non-audit services and auditor independence, and therefore no effect on audit quality (Firth, 2002; Whisenant *et al.*, 2003). However, the above points mentioned by auditors should be considered carefully, as auditors may work toward maximising their financial benefit by relaxing this particular requirement.

In addition, the literature reported what so-called “contractual nature advantage” as another favourable impact of providing non-audit services contemporaneously with the statutory audit service (Arruñada, 1999). The contractual nature advantage “is connected with the fact that the exchange of professional services involves high transaction costs due to the informational asymmetry existing between supplier of and client for such services. Therefore, it becomes worthwhile to make use of the safeguards (brand name, reputation, conduct rules, control systems among professionals, and client confidence) already developed when contracting and ensuring quality in auditing, thereby reducing the total cost of providing such services (Arruñada, 1999: 514).

It is worthwhile to mention that this result supports is supported by the findings of the first empirical model of this study (see table 6.6 in chapter 6). The regression result presents that there is no significant relationship between providing non-audit fees and audit quality. This

therefore indicates that providing non-audit service by same external auditor does not have significant relationship with audit fees. The result, again, indicates that there is no concern about auditor independence particularly regarding the economic bond between auditors and their clients.

On the other hand, audit committee tenure increases members' experience of the company's operations and therefore may help them developing their monitoring competencies (Gendron and Bédard, 2010); respondents from the auditor group stated that long tenure for an audit committee member might affect his/her independence as this could create a close relationship with management. One of them raised the following important point:

The important point in my mind to ensure the effectiveness of directors of audit committees is stating a maximum limit of years for their service within the same committee, because in Jordan they have long tenure and I have a concern whether those directors after a long period still have independence and still conduct effective monitoring procedures. They may behave in favour of management and against the auditors and this no doubt affects audit quality.

There is evidence from literature that directors' tenure could compromise their independence and thus make them less critical of the management (Vafeas, 2001; Vafeas, 2003). This therefore diminishes the quality of their monitoring of management and the reporting integrity. Vafeas (2003: 1045) proposed a management friendliness argument "suggesting that seasoned directors are more likely to befriend, and less likely to monitor, managers. In time, directors may be co-opted by management as directors become less mobile and less employable". In this vein, it is worth noting that some regulations around the world take into account the potential adverse effects of long tenure for directors and therefore state a maximum limit for their service, e.g. UK Combined Code on Corporate Governance (Smith, 2003) limits audit committee appointments to a maximum of nine years.

Furthermore, diligence is so important in indicating board effectiveness, and this has been captured through the literature using frequency of meetings as an indication of diligence. One of the directors (A) mentioned that it is worth looking at the duration of board meetings not only the number of meetings per year. Another one (B) also provided insight into the importance of the value and depth of the discussions inside the board.

When talking about board meetings throughout a year, I would say that meeting duration should be taken into account not just the number of meetings (director A).

From my point view, the nature and dynamics of the discussions in board meetings are extremely important. So, attention should be on what's going on inside the board room rather than focusing on formalism e.g. board size and frequency of meetings (director B).

Directors' business knowledge also gained attention from respondents as a way of boosting their oversight effectiveness. A director pointed out that:

The big challenge for directors is the extent to which they are up to date about a company's business operations. I suggest that policymakers set instructions to ensure that directors are under a continuous improvement system so that they are not keeping on leading the company by the old mind/school standards. This therefore will create a more effective board of directors and no doubt will contribute to the quality of financial information.

Another one has mentioned:

Fresh directors who join the board do not know much about the company and its business nature, and this adversely affects their effectiveness. So, I would suggest that the governance regulation includes requirements to force companies to run supportive training programmes about, for example, a company's operations, the legal requirements and relevant legislation.

Other competencies, such as the ability to work in small groups, negotiate and communicate effectively, have obtained recognition from respondents as important skills. In this vein, a director mentioned:

The board of directors is seen as a team work, so if this team is not competent in communication and interaction skills, this will lead to a weak board and therefore it will fail to carry out its monitoring role effectively. Such skills should be taken into consideration for board members.

The audit committees in Jordan are expected to play an important role in evaluating and supervising the internal control procedures to ensure its effectiveness, because effective internal control helps in preventing reporting failure and management cheating, and, in turn, helps the external auditing process (JCGC, 2008; Turley and Zaman, 2004; Lee *et al.*, 2004). Effective monitoring and reviewing of the internal control system by audit committees enhances their understanding of the firm's operations and increases the chance of discovering misstatements or earnings management acts. So, though JCGC highlighted the importance of internal control and added it to audit committees' agendas, some directors pointed out that the internal control report is not appropriately prepared and sometimes is not prepared at all. One of the directors mentioned:

Following up internal audit reports by the audit committee should be taken seriously and there should be a strict rule for this given the importance of these reports. Although the audit committee is responsible for internal audit and control, it does not prepare and review internal control reports appropriately, or does not do this function at all.

Therefore, the aforementioned suggestion could be taken into consideration by regulatory bodies in Jordan because of its importance.

7.8. Conclusion

The roles of boards of directors and audit committees are highlighted by the Jordanian regulations and in particular by the Corporate Governance Code as monitoring mechanisms to ensure high audit quality. This therefore helps in protecting shareholders' interests. The Jordan Securities Commission (JSC) has spent time and energy in recent years attempting to improve the roles of boards of directors and audit committees to ensure that investors obtain relevant and reliable information (because enhancing investors' confidence in the financial statements and financial market is a significant target for the regulators). The efforts of JSC in this vein are culminated in launching a Corporate Governance Code in 2008. This code put many responsibilities on the shoulders of boards of directors and audit committees as corporate governance players.

The secondary data model (first part of this thesis) examined whether of board and audit committee composition (in terms of independence, size and meetings) affect audit quality by employing historical quantitative data. Other board and audit committee attributes beyond the quantifiable characteristics, are largely unexplored and they no doubt play a role in audit quality. The effect of these attributes on audit quality is difficult to measure using published annual reports, and therefore the best way to capture their effect on audit quality is through eliciting the views of the major players in corporate governance. Consequently, the study aims to complete the picture about the role of corporate governance mechanisms, as suggested by the local governance regulation, on audit quality.

So the governance code recommends that boards of directors should be effective in carrying out their duties, e.g. authority over management and financial reporting, appropriate composition, diligence, and having appropriate knowledge resources. Also, the audit

committee should carry out its oversight role effectively, e.g. reviewing accounting policies, reviewing financial statements and internal control, acquiring relevant information from management, oversight of the audit process, interacting with auditors, etc. Given the regulators' targets and hopes about the effect of these characteristics/attributes in strengthening financial reporting and ensuring audit quality in Jordan, this chapter offers more insight by examining whether these attributes have an impact on audit quality as perceived by board members, audit committee members and external auditors.

Findings of the questionnaires analysing reveals that respondents gave high importance to the role played by most board of directors' characteristics in achieving high audit quality. These characteristics are mainly recommended by the Jordan Corporate Governance Code (2008) and are supported by the previous literature, as discussed earlier. Organising a company's financial affairs, setting risk management policies, ensuring that the executive managers have appropriate qualifications and experience, reviewing and evaluating the performance of a company's executive management by the board, in addition to board independence, are the activities/attributes that obtained strong agreement from an overwhelming majority of the respondents as having a contribution to audit quality. Thus, it can be concluded that role of board of directors, as perceived by the respondents, is to a large extent a contributor to audit quality. This conclusion supports the first hypothesis in the questionnaire survey model.

However, respondents were not fully agreed on some board characteristics, e.g. board size and gender diversity. Separate questions have been asked to examine the potential effect of women on the board as well as the potential effect of board size. The results confirmed that having women on the board is likely lead to a higher level of conflict, and large board size results in higher coordination costs, time-consuming decisions and more communication problems. This may have implications for the selection process of board members.

Regarding the role played by audit committees in promoting high audit quality, respondents underscored most of these activities. As expected, given that it has a direct monitoring role over the entire financial reporting process, all audit committee functions, audit committee composition and audit committee resources have been rated as very important factors for the effectiveness of audit committee oversight, which in turn increases audit quality. Thus, it can be concluded that the role of audit committees, as perceived by the respondents, contributes to a large extent to audit quality. This conclusion supports the second hypothesis (related to the second model).

Moreover, it can be concluded that all ownership types in Jordan play a positive role in increasing audit quality given the perceptions of audit committee members, other board members and external auditors. These positive perceptions may have an impact on the behaviour of investors in the financial market. The Kruskal-Wallis test showed no significant differences between the three groups, indicating consistent perceptions regarding this question. The result is consistent with the argument that large capital providers have a significant role in monitoring and controlling managers' decisions due to their ownership volume, and because they are better informed than individual investors. This result supports the third hypothesis of the survey model.

In terms of significant differences between groups, there is high consistency between their perceptions. However, the external auditors added more emphasis on the role of boards of directors in ensuring a high level of transparency than did other groups. Also, there was less agreement from external auditors that women increase levels of conflict in the boardroom; this view is lower than the other two groups, and the possible reason, as mentioned before, could be because they have less experience inside the boardroom than the directors. Auditors also provided low agreement about role of audit committees in monitoring their independence,

their audit plan and approve their fees. Furthermore, directors who are not from audit committee showed their concern about informal interaction between auditors and audit committee. Apart from these, all groups consistently perceive the importance of the board and audit committee attributes presented.

Furthermore, the study has offered an important contribution by extending the investigation of boards of directors' and audit committees' roles in promoting audit quality to dimensions that, to the best of my knowledge, have not previously been investigated, and also highlighted the importance of other kinds of audit committee experience apart from what policymakers have emphasised, i.e. experience that can be voluntarily added to audit committees (e.g. audit, legal, business operation experience). Recommendations concerning some governance aspects have been put forward by the respondents.

CHAPTER EIGHT: CONCLUSION AND IMPLICATIONS

8.1. Introduction

This chapter offers a brief picture of the entire thesis. It presents the summary of study motivation and aims, the main findings, contribution to knowledge, implications for policymakers, limitations and suggested avenues for future research.

8.2. Review of the research questions

The agency problem that arises between those who prepare financial information (management) and those who use it (owners) is the main motive for the external audit. High audit quality is important to companies as it plays a significant role in enhancing the quality of financial statements, safeguarding the shareholders' interests, and increasing the investors' confidence in the financial statements. This confirms that the theoretical legitimacy of the external audit function is reducing the agency problem, for example, by allowing shareholders and other outsiders to verify the validity of financial statements.

Corporate governance regulation in Jordan highlighted the role of boards of directors and audit committees as important pillars of the corporate governance system. One of the expected roles of these governance mechanisms is the positive contribution to audit quality. Therefore, the essential aim of this study is to examine whether these corporate governance mechanisms fill this anticipated role and do indeed ensure high audit quality.

In addition, since legal protection for shareholders is relatively poor in developing countries, the concentration of ownership is important as an effective internal corporate governance mechanism to protect investors' interests. This study, therefore, has a motive to examine whether the different types of controlling shareholders, who are common in the Jordanian market, have a positive effect on audit quality.

Furthermore, given that the Jordanian corporate governance code is in its infancy; this motivates this study to look beyond the current governance recommendations to gain a complete understanding of the characteristics that determine boards of directors' and audit committees' effectiveness. This is achieved by asking these relevant respondents to consider possible improvements or changes to the current code. This particularly includes suggestions concerning the board of directors and the audit committee's mechanisms that they feel are important in promoting audit quality, apart from what is already recommended in the current governance code.

The aforementioned objectives of the study have been achieved through the following research questions:

1. Do boards of directors and audit committees, as corporate governance mechanisms, have a significant impact on audit quality in a developing market like Jordan?
2. Is the level of audit quality in Jordan related to the common ownership identities?
3. What changes to the extant governance regulatory framework do respondents believe would most improve audit quality?

A summary of the findings which provide answers to these research questions are presented in the following section (in addition to the detailed discussion in chapters five and seven).

Two different methodologies (secondary data approach and survey approach) are used to tackle these research questions. These different methodologies provide a deep knowledge and broaden the generalisability of the results. The secondary data-based model examined the quantifiable boards of directors' and audit committees' characteristics that are accessible through the published annual reports. These are: board independence, role duality, board size, frequency of board meetings, gender diversity on the board, audit committee independence, audit committee financial expertise, audit committee size and frequency of audit committee meetings. Furthermore, this part empirically examines whether audit quality is affected by the different ownership identities in the Jordanian market. These types of ownership are family owners, government, foreign owners (Arab and non-Arab investors), non-financial institutions, and financial institutions.

The questionnaire survey approach aimed to provide a clearer understanding of the impact of boards of directors, audit committees and different ownership identities on audit quality. To achieve this goal the questionnaire gathered the viewpoints of the important players in corporate governance: the members of boards, members of audit committees and external auditors. The way that these groups think can affect the impact of the Jordanian governance code recommendations and may provide useful feedback for the regulatory bodies in particular when considering current corporate governance practices.

However, both research approaches have limitations: the secondary data approach suffers from the risk of omitted variables and it is also difficult to find strong and reliable proxy variables (Beattie *et al.*, 2012), which in turn fails to provide a deep insight into the phenomenon under study. In addition, in a survey-based approach the sample size is relatively small, and this may decrease the scope for generalising the findings. Given this, a combination of these research approaches is considered a good methodology choice

(Rudestam and Newton, (2007). Moreover, using different data collection methods within a piece of research ensures the accuracy of data interpretation, enables researchers to obtain a comprehensive overview of a particular issue, to interpret the research findings, overcome the potential bias of a single method approach (Hussey and Hussey, 1997) and leads to greater validity and reliability.

8.3. Review of findings

The first model of the study addressed the first and second research questions using a secondary data approach. By using different estimation methods e.g. fixed effect, random effect and robust standard error, the first model of the study highlights the importance of the boards of directors' independence, audit committees' independence, family ownership, bank ownership and government ownership in ensuring high audit quality. However, gender diversity and board size show an adverse correlation with audit quality. The likely reasons for this negative relationship are clarified by the perceptions of the respondents in the second model. The results indicate that a large board size leads to higher coordination cost, less effective communication and more time to taken reach decisions. More females in the boardroom leads to more conflict and therefore decrease board effectiveness.

With respect to audit committees, the regression results show that more independent members and more members having financial experience are positively correlated with audit quality. Thus, these characteristics play an essential monitoring role to ensure the quality of financial reporting and to serve as an important governance mechanism.

These outcomes are consistent with agency theory propositions and in line with the notion that more independent members in the board create a more effective monitoring role. They seek to protect their reputation capital and to promote shareholder interests by purchasing differentially higher-quality audits. The finding of the impact of the different ownership identities is also in line with the argument that large capital providers ask for additional audit quality to monitor their investments and to complement their role in monitoring and controlling managers' decisions. They also serve to assure minority shareholders that their interests are sufficiently protected. This, consequently, leads to there being less information asymmetry and so less agency conflict.

Obviously, from the significance level of the reported results, the boards of directors' and audit committees' independence stands as the most important attribute that enhances audit quality. Therefore, the regulatory bodies can recognise the essential role played by independent directors as one of the most important components of the corporate governance system in Jordan. Also, firms' directors can benefit from this result by using it as a parameter to assess how board and audit committee characteristics may affect financial reporting and audit quality.

Since it is difficult to assess audit quality *ex-ante* because the amount of assurance provided by auditors is unobservable, and because there are different views as to what constitutes a higher-quality audit; the audit fee level is used in the first model as a proxy to capture audit quality. Previous literature and contextual factors support this proxy as the most appropriate one in the Jordanian context. Other proxies in the Jordanian context like Big-4 firms or industry specialisation are less relevance for the reasons discussed in section 4.2.2. Also the studies from this market revealed that audit fees are important to motivate auditors to do better work, and if an auditor who receives high fees delivers poor audit quality, this makes

him lose face and feel shame. In addition, in the questionnaire, there is a question asking respondents about the extent to which they do believe that audit fees, audit firm size, Big 4 affiliates and audit specialisation are relevant audit quality indicators in Jordan. The answers gave much recognition to audit fees as a superior proxy for audit quality within the Jordanian environment.

With respect to the survey part, the results of analysing 199 questionnaires reveal that respondents gave high importance to the role played by most boards of directors' characteristics in promoting audit quality. These characteristics are mainly recommended by the Jordan Corporate Governance Code (2008) and are supported by the previous literature, as discussed earlier. Organising a company's financial affairs, setting risk management policies, ensuring that the executive managers have appropriate qualifications and experience, reviewing and evaluating the performance of a company's executive management by the board, in addition to board independence, are the activities/attributes that obtained strong agreement from an overwhelming majority of the respondents as having a major contribution to audit quality.

For the perceived roles of audit committee activities in promoting high audit quality, respondents underscored most of these activities. As expected, given that audit committees have a direct monitoring role over the entire financial reporting process; audit committee functions, audit committee composition and audit committee resources have been rated as important factors in the effectiveness of audit committee oversight, which in turn increases audit quality.

However, the findings of the frequency of audit committees meetings show no significant effect, indicating that the number of meetings does not seem to be a relevant indication of

audit committee diligence (i.e. does not necessarily translate to effective monitoring over financial reporting and audit quality). Also, some of the audit committee's activities; like reviewing auditors' independence, approving non-audit fees, approving audit plan are perceived by the "auditors" as less important for audit quality. The most likely reason for this is that external auditors may have concerns about being threatened by the audit committee authority, and auditors might not entirely agree with the notion that providing non-audit services could increase their economic dependence on the client and therefore impair their independence.

Moreover, given respondents' views, it can be concluded that the different ownership types in Jordan play a positive role in increasing audit quality. These positive perceptions may have an impact on the behaviour of investors in the financial market. The Kruskal-Wallis test showed no significant differences between the three groups, indicating consistent perceptions regarding this question. The result is consistent with the argument that large capital providers have a significant role in monitoring and controlling managers' decisions due to their ownership volume, and because they are better informed than individual investors.

A number of recommendations, to the current governance code, have been put forward by the respondents. The areas they most focused on were: audit committee tenure, internal control systems, non-audit services, board dynamics, audit committees' skills, meetings' agenda and length of meetings, and training scheme for new directors.

Thus, the findings of the study answer positively the research questions by confirming the significant role played by the corporate governance mechanisms (boards of directors, audit committees and the dominant owners in the ownership structure) in ensuring high audit quality. These findings indicate that the governance regulations can contribute positively to

audit quality even in developing countries i.e. the weak legal system and cultural differences compared to developed countries do not affect the role played by the governance mechanisms on audit quality. This conclusion is consistent with the notion that high quality governance systems are equally, or even more, important in developing countries that are attempting to develop their capital markets and to gain credibility among investors (Jordanian public companies are under continuous encouragement from ASE and JCS to comply with the code in order to achieve these objectives). This is also supported by corporate governance studies from different contexts, e.g. Yatim et al. (2006) from Malaysia, Rustam et al., (2013) from Pakistan, Zaman et al., (2011) from the UK; Carcello et al., (2002) from the USA; Bliss (2011) from Australia.

Consequently, it can be concluded that the outcomes of this study are, to a large extent, consistent with the hopes and expectations of the Jordanian regulatory bodies. The overall findings indicate that the governance mechanisms set by JCGC (2008) to a large extent lead to effective monitoring over auditing (monitoring approach) and the role of these mechanisms is not just symbolic. This highlighted an active (rather than passive) monitoring role of the different governance mechanisms under investigation which is, therefore, consistent with the agency theory assumptions.

In summary, the survey part examined the effectiveness of boards of directors and audit committees, as well as the role of ownership types on audit quality from perceptual perspectives that is to say from the views of the respondents involved. The first part of the thesis also targeted the same objectives but through a different research methodology, i.e. using historical data, and overall it is worth saying that the second part supports the inferences of the first part as both have provided consistent findings. Hence tackling the same issue with these types of investigations together paints a fuller picture, enriches data quality,

informs the debate and certainly offers significant insights into the various roles of corporate governance in Jordan in promoting high audit quality.

8.4. Contribution to knowledge and implications for policymakers

Although there is plenty of research on corporate governance in countries within the Anglo-American and Continental European countries, those in the Middle East and North Africa region (MENA) get minimal attention. So the corporate governance research in this region is still underdeveloped. Therefore, corporate governance research in such an environment is recommended as it provides a valuable contribution to the literature.

Since the majority of the relevant studies are conducted in the United States and the United Kingdom, these studies leave uncertainties regarding the direction and magnitude of the empirical relationship in a context like Jordan. These uncertainties come from the difference in the institutional characteristics of Jordan in comparison to these developed markets; such as the relatively less restrictive auditor's liability, lower disclosure requirements, lower public enforcement, and other institutional differences.

Given this, the context that has been considered in this study is institutionally different from the Western context, and at the same time is similar to developing countries, particularly those in the MENA region as they share a common culture, religion, language, tribal and family traditions and a colonial effect. Therefore, although this study is targeted at the

Jordanian market in particular, its findings can also be generalised to other countries that share the same contextual characteristics.

The secondary data model provides a detailed and timely review of corporate governance characteristics and ownership structures for a unique database which is manually collected from a sample of 690 firm-year observations of non-financial listed firms in Jordan between 2009 and 2014. This work contributes significantly to the existing body of knowledge, by providing more details about firm-level corporate governance structures in Jordan as one of the Middle East and North African (MENA) countries where corporate governance is still underdeveloped.

Furthermore, the survey part offers an important contribution by extending the investigation of boards of directors' and audit committees' roles in promoting audit quality to dimensions that, to the best of my knowledge, have not previously been investigated, e.g. the role of the availability of monetary and information resources for directors, board compliance with law, board authority to review executive managers' performance and to ensure that they are appropriately qualified, the formal and informal interaction of audit committees with auditors, and also the importance of other kinds of audit committee experience, apart from what policymakers have emphasised. In addition, little is known about other governance dimensions from perceptual viewpoints.

As clearly mentioned by the respondents, the regulatory bodies should seek a balanced portfolio of skills within the audit committees, i.e. they should look beyond financial expertise and consider a wider set of experiences, e.g. audit, legal, business operation experience, not just focusing on financial expertise.

Moreover, given that the literature suffers from a tight focus on the composition of boards of directors and audit committees, e.g. independence, meetings, size, and given that the majority of previous studies have been conducted in developed contexts, this study contributes to the literature by moving beyond these boundaries and extending the investigation methodologically and geographically. In addition to the contribution to accounting and corporate governance literature, the findings regarding board gender diversity and board size may be useful for team effectiveness and heterogeneous groups' literature.

Obviously, from the reported results, the independence attribute of boards of directors and audit committees stands as the most valuable corporate governance mechanism. Therefore, the regulatory bodies can recognise the essential role played by independent directors as one of the important components of the corporate governance system in Jordan. In addition, firms' directors can benefit from this result by using it as a parameter to assess how board and audit committee characteristics may affect financial reporting and audit quality.

These overall findings can, therefore, be useful for regulators in terms of evaluating the impact of extant governance regulation on audit quality or in terms of considering them for future corporate governance reform, e.g. given that the corporate governance code in Jordan is still not obligatory, regulators may work towards improving the code and making it a compulsory requirement. Companies also may adhere to the code recommendations in light of its benefits. Moreover, the positive inferences gained about the impact of different ownership types on audit quality have a potential impact on the behaviour of investors and reduces their concern that large shareholders may exploit corporate assets. The final conclusion can assist financial market participants in Jordan to make better-informed investment decisions.

8.5. Limitations and future research

Like any research project, this study is not without limitations. First, the study population is Jordanian shareholding companies. However, a number of companies are excluded due to their business nature and others have been excluded due to a lack of disclosure. In terms of different business nature, the study excluded financial companies as they are normally considered separately, due to differences in their businesses and regulatory environment. In this vein, future studies could be focused on financial companies, e.g. banks and insurance companies, given their vital role in the Jordanian financial market.

In terms of disclosure problems, although there were 177 listed non-financial companies on the Amman Stock Exchange at the end of 2014, only 115 of them are considered in this study due to the data unavailability from their audit committees. While the corporate governance practices and disclosure levels, in particular, have evolved in recent years in Jordan, a future study could use larger sample of firms and therefore increase the robustness of results, as well as the level of generalisability. Moreover, increasing the number of the respondents, especially auditors, will provide broader and richer inferences regarding corporate governance mechanisms and their impact on audit quality.

Second, the study relies on data published in annual reports, and self-administrated questionnaires. However, other research approaches such as interviews or focus groups could provide richer insights and a more accurate picture regarding boards of directors' and audit committees' effectiveness, as well as ownership types and the role of these mechanisms in ensuring higher audit quality.

Third, future research is needed to focus on the length of meetings, not just their number, the nature and tone of board discussions and on other competencies and professional skills, including the ability to work, negotiate and communicate effectively in small groups. In addition, directors should play an effective role, not merely voting on or approving what they receive from management, i.e. how a board effectively formulates actions and behaves in meetings is very important. So a good research opportunity could be going inside the boardroom and studying directors' behaviour and their interactions, which will, therefore, provide a deep insight into directors' interactions during meetings.

Fourth, 95% of the respondents are male which is expected given the level of women's participation in the workforce in such an environment. However, this creates a concern regarding the validity of the perceptions that came from the question about the role/behaviour of female in the board of director (i.e. the result should be considered with very cautious). Thus, future research could try to include more women in the sample in order to avoid any bias, or carry out an observation of the behaviour of female directors in the boardroom which could offer more rigorous inferences.

Fifth, audit quality is difficult to measure as the level of assurance provided by auditors is unobservable. This proxy has a drawback as large audit fees paid may make auditors more economically dependent on their clients and affect their independence. Also, audit fees levels may reflect the negotiation power between audit firms and their clients rather than audit quality. Thus, given that the audit fees model is employed to capture audit quality, as audit effort and audit fees are highly correlated, using actual audit hours spent in the auditing process (instead of fees), where possible, is a better indicator of audit effort, e.g. analysing timesheets of auditors and finding out the time spent for each audit assignment.

Sixth, the scope of this study is non-financial listed firms on the Amman Stock Exchange (ASE). Non-listed firms form more than 90% of the total firms in Jordan, and given the importance of these businesses to the national economy, a new corporate governance code was enacted in 2013 for this type of firm. Future research might take into consideration the non-listed firms, e.g. private limited liability and other types of medium and small entities.

Seventh, the result concerning audit committee experience also raised a motivation for future research to address other experiences that the members should hold like legal expertise, business operation, and audit. The existence of legal experts on an audit committee, for instance, makes them more interested to avoid litigation that could arise from fraudulent financial reporting, i.e. their legal background makes them more vigilant to avoid the legal liability threat.

Eighth, there are a number of suggested improvements to the Jordanian governance code made by the respondents in the last part in chapter 7. However, these suggestions were provided by respondents individually (as a response to open-ended questions in the questionnaire) and they have not gained any approval or rejection from other respondents. Future research could take these suggested improvements into consideration and may investigate the extent to which they are important in promoting high audit quality.

Ninth, future research can cover a comparative study of Jordan with other developed or developing countries to highlight the impact of different institutional settings, and increase generalisability.

Finally, the results of the study and, therefore, the recommendations made should be taken into consideration with cautious until confirmed by other studies and using other qualitative research methods to obtain in-depth information about the matter under investigation.

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APPENDIX 1 (A): QUESTIONNAIRE

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Thank you again for your acceptance to take part in this survey.

This questionnaire has been designed to elicit your perceptions about the Corporate Governance recommendations (2008), particularly board of directors and audit committee features and their effect on audit quality. Also, the effect of different ownership types that are common in Jordan and their effect on audit quality.

All responses will be confidential and will not be shared with anyone outside of the research team compromising of myself and my supervisors. Your responses will be treated anonymously and any responses will only be considered in aggregate form along with the responses of all other survey respondents. The responses given will be held securely in compliance with Durham University's Data use policy.

Please do take care to answer the questions as fully and accurately as you can. The questionnaire has been designed for you in a convenient interface to enable you to complete it in the shortest possible time.

Your responses are highly appreciated.

Yours faithfully,
Salem Alhababsah,
PhD student, Durham University Business School

Part one: General information

Position:

- ☐ Director in the board (but NOT member in the audit committee)
- ☐ Member in the audit committee
- ☐ External auditor

Gender

- ☐ Male
- ☐ Female

Experience

- ☐ Less than 4 years
- ☐ 4 - 8 years

- ☐ More than 8 years and less than 12 years
- ☐ More than 12 years

Qualification

- ☐ Postgraduate
- ☐ Undergraduate
- ☐ Other

Subject of your qualification:

NOTE: The questions in this page are relevant for for directors ONLY, so in the real questionnaire will be seen by directors, and hidden for auditors

The Jordanian Corporate Governance Code (2008) states that the board member loses his independence in any of the following cases: "If he is, or has been, employed by the company or any of its affiliates during the last three years preceding his nomination for membership of the board of directors; If any of his relatives is, or has been, employed in the executive management of the company or any of its affiliates during the last three years preceding his nomination for membership of the board; If he or any of his relatives has direct or indirect interest in the contracts, projects and engagements signed with the company or any of its affiliates to the value of JD 50,000 or more; If the member or any of his relatives is a partner of the company's auditor, or if he is or has been a partner or employee of the company's external auditor during the last three years preceding his nomination for membership of the board; or If the member has a control in the company of more than 10% of the company's capital".

Given this definition, are you an independent director?

- ☐ Yes
- ☐ No

Do you have any financial experience?

- ☐ Yes
- ☐ No

If you are the chairman, do you hold CEO position as well:

- ☐

Yes

☐ No

☐ I am not the Chairman

Part Two: Perceptions about audit quality

External audit function plays a significant role in corporate governance system as it bridges the gap between those who prepare financial information (management) and those who use it (shareholders). It is considered as a key monitoring device because it enhances the quality of financial statements, safeguards the shareholders' interests, and helps the investors for their investment decisions and by giving them confidence about company status.

The effectiveness of the audit function depends mainly on the audit quality provided. To obtain high-audit quality as the previous relevant studies documented, auditor should have in particular sufficient competencies to detect the material error and misstatements in the financial statement, and also should have the independence to report these material errors (or misstatements).

A- In your view, to what extent you believe that the following external auditor's attributes represent/ contribute to audit quality in the Jordanian context:

	Strongly disagree	disagree	Neither agree nor disagree	Agree	Strongly agree
Technical competency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Audit experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT proficiency in auditing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General knowledge about business environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Independence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objectivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments, if any:

B- In your view, to what extent do you think that following variables are indication of audit quality in Jordan (holding all other factors constant)

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
Audit fees level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appointment of an audit firm affiliate to KPMG,					

PricewaterhouseCoopers, Ernest and Young, or Deloitte	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Audit firm size	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry specialisation auditors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments (if any):

Part Three: Board of directors' attributes and audit quality

A- In your view, to what extent you believe that the following board of directors' features might contribute to increase audit quality:

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Board of directors efficiently organizes the company's financial affairs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Board of directors sets risk management policies to address any types of risk that the company may face.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Board of directors sets a disclosure policy that ensure high level of transparency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Board of directors ensures that the executive managers have the appropriate qualifications and experience needed to carry their duties effectively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Board of directors reviews and evaluates the performance of the company's executive management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Board of directors acquires credible relevant and timely information from the management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Board of directors have adequate knowledge of relevant legislation (e.g. corporate governance code, company law, financial market regulations).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
8. Board of directors takes necessary procedures to ensure compliance with the relevant regulations in force.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Board of directors comprised of 3-13 members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Board of directors meets 6 or more times a year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Board of directors comprises of independent directors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Members of the board do not represent any other companies that run similar business.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Chairman position separated from CEO position.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Directors have not been employed by the company or any of its affiliates during the last three years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
15. Directors have no relatives been employed in an	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

executive position of the company or any of its affiliates during the last three years.					
16. Directors have no relationship with the firm's auditors during the last three years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Directors have no business relationship with the firm (worth more than 50K)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Directors have no control on more than 10% of the company's capital.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Board of directors comprises female(s).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B- Regarding gender diversity in the board, to what extent you agree about the following statements:

	strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Women are committed to attendance of board meetings more than men	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Women are more conservative in their decisions than men	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Over-conservativeness by women result in counterproductive over the firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Women in the board ask for more audit work compared to men	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Women in the board result in higher levels of conflict	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C- Regarding board size, to what extent you agree about the following statements:

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	strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Large board size results in higher coordination cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Large board size results in more time for decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Large board size results in more communication problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Large board size is ineffective in monitoring management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D- In your opinion, what are improvements you suggest to the current board of directors-related regulation would most improve audit quality?

Part Four: Audit committees' attributes and audit quality

A- In your view, to what extent you believe that the following audit committee (AC) features might contribute to increase audit quality:

	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. AC reviews and approves significant accounting policies of the firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. AC monitors and reviews internal control system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. AC reviews and approves company's financial reports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. AC monitors and reviews financial risk management system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. AC reviews the independence of the external auditor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
6. AC reviews and approves audit fees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. AC reviews and approves types and fees of non-audit service by external auditor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. AC reviews and approves the appointment, re-appointment, and removal of the external auditor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Audit committee composed of a member who has relevant financial experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. AC is composed of independent non-executive directors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
11. AC comprised of 3 or more members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. AC acquires credible timely information from the management to achieve its duty effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. AC acquires enough monetary resources from the firm to achieve its duty effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. AC meets 4 or more times a year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B- In your view, interaction between the external auditor and audit committee might increase audit quality if:

	strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. AC communicates with the external auditor on all key issues associated with the audit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. AC discusses and approves scope of audit plan with external auditors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. AC approves the external auditors evaluation of control procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. AC meets with external auditor without management presence in order to discuss audit issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. AC members have informal channel of communication with the auditor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C- In your view, audit committee is be more effective when it is composed of members who have knowledge and experience in:

	strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
- Finance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Accounting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- External audit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Internal audit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Legislation (legal experience)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Business knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other type(s) of experience you think is(are) relevant, please specify:

D- In your opinion, what are improvements you suggest to the current audit committee-related regulation would most improve audit quality?

Part Five: Ownership structure and audit quality

There are different types of shareholders in the Jordanian market which are family owners, banks, non-financial institutions, government, Arab and non-Arab foreign shareholders.

Previous relevant studies highlight that the different types of shareholders have different investment policies, different degrees of incentives and abilities to exert effective monitoring, and therefore they demand different degrees of audit quality to protect firms and minority owners' wealth.

In your opinion, to what extent you believe that these structures of ownership may contribute to obtain high audit quality:

1. Family Ownership

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Please mention the most likely reason(s) for your answer:

2. Financial institution (banks)

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Please mention the most likely reason(s) for your answer:

3. Non-financial institutions

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Please mention the most likely reason(s) for your answer:

4. Government

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Please mention the most likely reason(s) for your answer:

5. Arab-foreign owners

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Please mention the most likely reason(s) for your answer:

6. Foreign owners (non-Arab)

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Please mention the most likely reason(s) for your answer:

Part six: Please use this box if you want to add more information.

APPENDIX 1 (B): QUESTIONNAIRE IN ARABIC LANGUAGE

Default Question Block

تحية طيبة وبعد،،

شكراً جزيلاً على قبولكم المشاركة في هذا الاستبيان.

تهدف هذه الدراسة الى قياس وجهة نظر أعضاء مجالس الإدارة (ومن ضمنهم أعضاء لجان التدقيق) ومدققي الحسابات فيما يتعلق بدور حوكمة الشركات (دور مجلس الإدارة ولجنة التدقيق بشكل أساسي) في زيادة جودة التدقيق في الأردن. كما نتطلع أيضاً لمعرفة رأي هذه الأطراف فيما اذا كانت جودة التدقيق تتأثر بأنواع هيكل الملكية (عائلات، بنوك، أجانب... إلخ) الموجودة في السوق الأردني.

سيتم التعامل مع اجابات الاستبيان بسرية تامة كما لن يتم الإشارة الى الشخص الذي قام بتعبئة الاستبيان. باستثناء الباحث وفريق العمل المكون من مشرفين اثنين، لن يتم مشاركة هذه المعلومات لأي أطراف أخرى. سيتم التعامل مع الإجابات وفقاً لسياسة استخدام البيانات المطبقة في جامعة درم.

لقد تم تصميم الاستبيان بطريقة تساعد في اتمام الاجوبة بشكل مريح وبأقصر وقت ممكن. يرجى تعبئة الاستبيان بشكل كامل وتوخي الدقة قدر المستطاع.

شاكرين لكم تعاونكم

خالص الاحترام،،
سالم الحببسه

الجزء الأول: المعلومات العامة

المنصب الحالي

- ☐ عضو مجلس إدارة (وليس عضو في لجنة التدقيق)
- ☐ عضو في لجنة التدقيق
- ☐ مدقق حسابات خارجي

الجنس

- ☐ ذكر
- ☐ انثى

الخبرة العملية

- ☐ 4 سنوات فأقل
- ☐ أكثر من 4 سنوات - 8 سنوات
- ☐ أكثر من 8 سنوات- 12 سنة
- ☐ أكثر من 12 سنة

المؤهل العلمي

- ☐ دراسات عليا
☐ بكالوريوس
☐ غير ذلك

التخصص

- أشارت مبادئ حوكمة الشركات الاردنية (2008) الى أن عضو مجلس الإدارة يفقد استقلاليته
1. إذا كان يعمل أو كان قد عمل لدى الشركة أو أي شركة حليفة خلال السنوات الثلاث الأخيرة السابقة لتاريخ ترشحه لعضوية المجلس.
 2. إذا كان أحد أقربائه يعمل أو كان قد عمل في الإدارة التنفيذية لدى الشركة أو أي شركة حليفة خلال السنوات الثلاث الأخيرة السابقة لتاريخ ترشحه لعضوية المجلس.
 3. إذا كان له أو أحد أقاربه مصلحة مباشرة أو غير مباشرة في العقود والمشاريع والارتباطات التي تعقد مع الشركة أو أي شركة حليفة، والتي تساوي أو تزيد قيمتها عن (50000) دينار.
 4. إذا كان العضو أو ممثل العضو الاعتباري أو أحد أقاربهم شريكا لمدين الحسابات أو موظفا لديه، أو إذا كان شريكا أو موظفا لديه خلال الثلاث سنوات السابقة لتاريخ ترشيحه لعضوية المجلس.
 5. إذا كان للعضو أو لممثل العضو الاعتباري سيطرة على الشركة من خلال تملك 10% أو أكثر من رأسمال الشركة.

بناءً على ذلك، هل أنت عضو مجلس إدارة مستقل؟

- ☐ نعم
☐ لا

هل لديك خبرة في الأمور المالية أو المحاسبية؟

- ☐ نعم
☐ لا

إذا كنت تشغل رئيس مجلس الإدارة، هل تشغل أيضا منصب المدير التنفيذي في نفس الوقت:

- ☐ نعم
☐ لا
☐ لا أشغل منصب رئيس مجلس الإدارة

الجزء الثاني: جودة التدقيق

يلعب التدقيق الخارجي دورا فعالاً في زيادة الثقة في البيانات المالية المنشورة، وبالتالي زيادة الثقة في السوق المالي بشكل عام. تعتبر جودة التدقيق العنصر الجوهري في هذه المسألة حيث بدونها تفقد عملية التدقيق قيمتها. وبالتالي فإن على مدقق الحسابات وكما ركزت التشريعات ذات العلاقة أن يكون على مستوى من الكفاءة تؤهله لإعطاء تأكيد معقول بأن القوائم

المالية خالية من الأخطاء او التحريفات الجوهرية، كما يجب أيضا أن يكون لديه الاستقلالية للإفصاح عن أي من هذه الأخطاء والتحريفات.

برأيك، الى أي مدى تعتقد أن خصائص المدقق التالية يمكن أن تساهم في زيادة جودة التدقيق في البيئة الأردنية:

موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
الكفاءة المهنية				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
الخبرة العملية في التدقيق				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
الكفاءة في استخدام الحاسوب في أعمال التدقيق				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
المعرفة في بيئة الأعمال المحلية				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
الاستقلالية				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
الموضوعية				

أي ملاحظات إضافية:

برأيك، الى أي مدى تعتقد أن العوامل التالية من الممكن أن تعطي مؤشرا على جودة التدقيق في البيئة الأردنية:

موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
حجم أتعاب التدقيق				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
تعيين مكتب تدقيق تابع لشركات التدقيق الأربع الكبرى (EY, Deloitte, PwC, KPMG)				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
حجم مكتب التدقيق				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
تعيين مدقق متخصص في قطاع معين				

أي ملاحظات إضافية:

الجزء الثالث: خصائص (أنشطة) مجلس الإدارة وجودة التدقيق

أ- برأيك، ما مدى اعتقادك أن خصائص/أنشطة مجلس الإدارة التالية يمكن أن تساهم في زيادة جودة التدقيق:

موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1- تنظيم مجلس الإدارة بشكل كفؤ وفعال للشؤون المالية للشركة				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2- قيام مجلس الإدارة بوضع سياسة إدارة المخاطر للتعامل مع أي مشكلة يمكن أن تواجه الشركة				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3- قيام مجلس الإدارة بوضع السياسات المتعلقة بالإفصاح والتي تضمن أعلى معايير الشفافية				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4- قيام مجلس الإدارة بالتأكد من أن المدراء التنفيذيين لديهم الكفاءة اللازمة لإدارة الشركة				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5- قيام مجلس الإدارة بمراجعة وتقييم أداء الإدارة التنفيذية				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6- حصول مجلس الإدارة على المعلومات ذات العلاقة في الوقت المناسب من الإدارة				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7- توفر المعرفة الكافية لدى مجلس الإدارة بالتشريعات ذات العلاقة (على سبيل المثال التشريعات المنظمة للسوق المالي)				
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8- اتخاذ مجلس الإدارة الإجراءات اللازمة للتأكد من التزام الشركة بالتشريعات ذات العلاقة				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9- وجود مجلس إدارة يتراوح حجمه بين 3-13 عضو				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10- قيام مجلس الإدارة بالاجتماع 6 مرات على الأقل خلال العام				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11- احتواء مجلس الإدارة على أعضاء مستقلين				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12- عدم اشغال أعضاء مجلس الإدارة أي عضوية في شركات أخرى تمارس نفس النشاط				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13- فصل منصب رئيس مجلس الإدارة عن منصب المدير التنفيذي				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14- عدم عمل أعضاء مجلس الإدارة في الشركة خلال الثلاث سنوات السابقة لتعيينهم في مجلس الإدارة				
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15- عدم عمل أي من				

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	أقارب أعضاء مجلس الإدارة في الإدارة التنفيذية للشركة خلال الثلاث سنوات السابقة لتعيينهم في مجلس الإدارة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	16- عدم وجود أي علاقات لأعضاء مجلس الإدارة مع مدققي حسابات الشركة خلال الثلاث سنوات السابقة لتعيينهم في مجلس الإدارة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17- عدم وجود أي علاقات عمل لأعضاء مجلس الإدارة مع الشركة تزيد عن 50 ألف دينار
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	18- عدم سيطرة أعضاء مجلس الإدارة على 10% أو أكثر من رأسمال الشركة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	19- احتواء مجلس الإدارة في تشكيلته على إناث

ب- فيما يتعلق بوجود المرأة في مجلس الإدارة؛ إلى أي مدى تعتقد بصحة أو عدم صحة الفقرات التالية:

موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1- تلتزم الإناث بحضور جلسات مجلس الإدارة أكثر من الرجال				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2- تظهر الإناث تحفظاً أكثر من الرجال فيما يتعلق بالقرارات المتعلقة بالشركة				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3- الإفراط في التحفظ من قبل الإناث يمكن أن يؤدي إلى نتائج عكسية على الشركة				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4- تطلب الإناث أعمال تدقيق إضافية مقارنة بالرجال				
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5- وجود الإناث في مجلس الإدارة يزيد من مستوى الصراع/ عدم التوافق عند اتخاذ القرارات				

ج- فيما يتعلق بحجم مجلس الإدارة؛ إلى أي مدى تعتقد بصحة أو عدم صحة الفقرات التالية:

موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1- الحجم الكبير لمجلس الإدارة يؤدي الى زيادة كلفة التنسيق
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2- الحجم الكبير لمجلس الإدارة يؤدي الى زيادة الوقت اللازم لاتخاذ القرارات
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3- الحجم الكبير لمجلس الإدارة

يؤدي الى صعوبة في التواصل

4- مجلس الإدارة الكبير غير فعال في مراقبة الإدارة التنفيذية

☐ ☐ ☐ ☐ ☐

د- برأيك، ما الإقتراحات التي يمكن اضافتها للتشريعات المتعلقة بمجلس الادارة والتي من الممكن أن تساهم في زيادة جودة التدقيق.

الجزء الرابع: خصائص (أنشطة) لجنة التدقيق وجودة التدقيق الخارجي

أ- برأيك، ما مدى اعتقادك أن خصائص/أنشطة لجنة التدقيق التالية يمكن أن تساهم في زيادة جودة التدقيق:

موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1- قيام لجنة التدقيق بمراجعة السياسات المحاسبية للشركة	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2- قيام لجنة التدقيق بمراجعة نظام الرقابة الداخلي	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3- قيام لجنة التدقيق بمراجعة التقارير المالية للشركة	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4- قيام لجنة التدقيق بمراجعة نظام إدارة المخاطر	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5- قيام لجنة التدقيق بمراجعة استقلالية مدقق الحسابات	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6- قيام لجنة التدقيق بمراجعة والمصادقة على اتعاب التدقيق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7- قيام لجنة التدقيق بمراجعة والمصادقة على اتعاب أي خدمات استشارية أخرى خلاف اتعاب التدقيق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8- مصادقة لجنة التدقيق على تعيين وانتهاء خدمات مدقق الحسابات	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9- احتواء لجنة التدقيق على أعضاء لديهم خبرة في الأمور المالية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10- احتواء لجنة التدقيق على				

أعضاء مستقلين (حسب تعريف مبادئ الحوكمة للاستقلالية والتي تم الإشارة لها في بداية الاستبيان)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
11- تتألف لجنة التدقيق من 3 أعضاء على الأقل	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12- حصول لجنة التدقيق على المعلومات موثوقة في الوقت المناسب من الإدارة	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13- حصول لجنة التدقيق على الموارد المالية اللازمة لإنجاز مهامها بفاعلية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14- اجتماع لجنة التدقيق 4 مرات على الأقل خلال السنة	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

بـ. برأيك، من الممكن أن يساهم التواصل بين لجنة التدقيق ومدققي الحسابات في زيادة جودة التدقيق في حال:

	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1- قيام لجنة التدقيق بالتواصل مع مدقق الحسابات فيما يتعلق بكل قضايا التدقيق الجوهرية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2- مصادقة لجنة التدقيق على خطة المدقق لأعمال التدقيق	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3- مصادقة لجنة التدقيق على تقييم مدقق الحسابات للإجراءات الرقابية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4- اجتماع لجنة التدقيق مع مدقق الحسابات بشكل دوري لمناقشة أمور التدقيق بدون حضور أي من الإدارة التنفيذية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5- وجود قنوات اتصال غير رسمية للجنة التدقيق مع مدقق الحسابات	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ج. برأيك، إلى أي مدى تعتقد أن الخبرة في المجالات المذكورة أدناه قد تزيد من فعالية لجنة التدقيق:

	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
خبرة مالية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
خبرة محاسبية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
خبرة في مجال التدقيق الخارجي	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
خبرة في مجال التدقيق الداخلي	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
خبرة قانونية	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
خبرة في طبيعة أعمال الشركة	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

خبرة في مجال (مجالات) أخرى، اذكرها

د- برأيك، ما الإقتراحات التي يمكن اضافتها للتشريعات المتعلقة بلجنة التدقيق والتي من الممكن أن تساهم في زيادة جودة التدقيق.

الجزء الخامس: هيكل الملكية وجودة التدقيق

يمتاز السوق الأردني بوجود عدة أنواع من الملكيات في الشركات المساهمة العامة مثل الملكيات العائلية، البنوك، المؤسسات غير المالية، ملكيات الأجانب العرب وملكيات الأجانب من غير العرب. أيضا بالرغم من عمليات الخصخصة التي حصلت في الفترة الأخيرة لا زالت للحكومة ملكيات في بعض الشركات. أثبتت الدراسات ذات العلاقة أن اختلاف أنواع الملكيات يترافق مع اختلاف السياسات الإستثمارية والأولويات لدى هؤلاء الملاك. وبالتالي قد تتفاوت قدراتهم و/أو رغباتهم بالقيام بالإشراف الفعال، أيضا و كنتيجة لذلك قد يتفاوت اهتمامهم في مستوى جودة التدقيق المقدمة.

في هذا الخصوص، الى أي مدى تعتقد أن أنواع الملكية التالية لها دور في زيادة جودة التدقيق في البيئة الأردنية (تهتم بجودة التدقيق):

1. الملكية العائلية:

- ☐ موافق بشدة
☐ موافق
☐ محايد
☐ غير موافق
☐ غير موافق بشدة

استنادا الى اجابتكم أعلاه، ما هي أهم الاسباب لذلك من وجهة نظركم:

2. ملكية المؤسسات المالية (البنوك):

☐ موافق بشدة

☐ موافق

☐ محايد

☐ غير موافق

☐ غير موافق بشدة

استنادا الى اجابتيكم أعلاه، ما هي أهم الاسباب لذلك من وجهة نظركم:

3. ملكية المؤسسات غير المالية:

☐ موافق بشدة

☐ موافق

☐ محايد

☐ غير موافق

☐ غير موافق بشدة

استنادا الى اجابتيكم أعلاه، ما هي أهم الاسباب لذلك من وجهة نظركم:

4. ملكية الحكومة:

☐ موافق بشدة

☐ موافق

☐ محايد

☐ غير موافق

☐ غير موافق بشدة

استنادا الى اجابتيكم أعلاه، ما هي أهم الاسباب لذلك من وجهة نظركم:

5. ملكية المستثمرين الأجانب (العرب):

- ☐ موافق بشدة
- ☐ موافق
- ☐ محايد
- ☐ غير موافق
- ☐ غير موافق بشدة

استنادا الى اجابتيكم أعلاه، ما هي أهم الاسباب لذلك من وجهة نظركم:

6. ملكية المستثمرين الأجانب (غير العرب):

- ☐ موافق بشدة
- ☐ موافق
- ☐ محايد
- ☐ غير موافق
- ☐ غير موافق بشدة

استنادا الى اجابتيكم أعلاه، ما هي أهم الاسباب لذلك من وجهة نظركم:

الجزء السادس: من فضلك استخدم المساحة المخصصة أدناه اذا كنت ترغب بإضافة أي معلومات: